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Shooting Stars and Dancing Fish: A Walk to the World We Want

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Shooting Stars and Dancing Fish
A Walk to the World We Want
Antonio A. Oposa, Jr.

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To the children of today
And those yet unborn:

May you,
And the children of the world
Still fill the Earth with
Laughter

Shooting Stars and Dancing Fish

In a city ablaze with light
Making day of a dark night,
A shooting star I do not see,
And the world becomes all
About me.

I forget I am but a grain of sand
Of a rich and living land.
I forget that my kind must care,
For Life-Sources needing great repair.

Hurry, hurry, dear friends,
Make haste to make amends.

The Seas, so 'lovely, dark and deep,'
If we only dare to care and keep,
The fish will feed us all a-plenty
And will even dance for you and me.

Seascape in Acrylic

FOREWORD

Painting Stories of Our Future

Since the beginning of time, human knowledge and culture have been passed down through stories. Short stories, songs, prayers, poems, even paintings can stick in your mind forever. These have always been the most powerful ways we learn and remember.

Tony is not only one of the world's greatest lawyers, he is also one of the world's greatest storytellers.

This book, in which he generously shares his experiences, his scars, and most importantly his humanity, is Tony's gift to generations to come.

But he does not entrust us with his life stories for entertainment. These stories have a purpose.

As Tony reminds us all, the time for taking is over. And the time for talking is over. These stories are a call to action.

Through humor, beauty and sometimes fear, Tony brilliantly demonstrates how we can and we should 'paint our future.' He opens our minds to the possibilities for brighter surroundings.

Concepts like creative justice and the law of life, are simple yet brilliant examples of how we must learn to interact with the world around us.

This is not a textbook meant just for lawyers, policymakers or scientists. Rather it distills concepts like law, diplomacy and observation to show where we need to go and how we can get there.

Whether it be writing, singing or painting, Tony has always had a gift for storytelling. This is a storybook for the future, and we are lucky to have Tony showing all of us the way.

Durwood Zaelke
President
Institute for Governance & Sustainable Development
Washington, DC

"This book paints a picture of the good life for all, everyone who is trying to decide how we will power, design and run our communities."

– Kristin Casper, Climate Litigation Counsel
Greenpeace International

"Imaginative, relentless and always good-humored, Tony sees possibilities that nobody else can. His activities in the Philippines change the conversation all over the world. Reading this little book is like hearing him speak – an unforgettable experience."

– Silver Donald Cameron, Author and Filmmaker
Canada

"In this wonderful little book, Tony Oposa – part lawyer, part firebrand and all storyteller – has woven together many lessons learned from waging environmental battles in his country. His optimism in the face of seemingly impossible odds helps us carry on in dark times. His wisdom, if applied, would make the odds all the better."

– Michael B. Gerrard, Professor and Director
Sabin Center for Climate Change Law
Columbia Law School, New York

"It is a spiritual journey through Environmental Law."

– Claire Kiss, Law Student
University of Oregon, USA

"The stakes have never been higher as they are now. Tony speaks to us in an honest voice, softly musing, funny, but exciting the reader with the urgency of action."

– Loren Legarda, Senator
Republic of the Philippines

"Tony Oposa is an extraordinary individual and a true representative of global citizens, be they already on this earth, those yet unborn or those not able to defend themselves. He has almost single-handedly defended them all in many public interest litigations. He has won landmark judgments in environmental jurisprudence. These decisions have established precedents that are cited and emulated by courts everywhere in the world. Tony's commitment for the welfare of the people and the planet needs to be cherished and replicated by all of us."

– Elizabeth Mrema, Director
Environmental Law and Conventions
United Nations Environment Programme (UNEP),
Nairobi, Kenya

"Tony challenges us to rethink wasteful consumption and shift to the Economics of Conservation, Protection and Restoration (CPR) – the cardio-pulmonary resuscitation of the vital organs of Life on Earth. We need to heed the advice of this sage of our times."

– Brian Preston, Chief Justice
Land and Environment Court
Australia

"Stories like these pave the way; they fill the poisoned poor with hope. You help set the stage for a time when placing carbon in the Earth's air and leaching known poisons into soil and water will be contrary to our love for one another and the Earth."

– Michael Wilson, Justice
Supreme Court of Hawaii

"*Shooting Stars and Dancing Fish* is a beautifully rendered reminder of the wonders of the natural world and of the human heart, and how they are inextricably intertwined. Through paintings, poems, pearls and prophecy, this book is at bottom a love story that propels the imagination and sustains the soul. It guides us as we wend our way through time and space in life's grand expedition for beauty, grace, meaning and peace."

– James May, Professor of Environmental Law
Widener University, Delaware, U.S.A.

Tony Oposa lives outside Metro Manila with wife, Greely, and their children. In Cavite province, he finds more time to paint, write and cultivate bamboo in a forest of native trees. The Sea calls him home to Bantayan Island at a moment's notice.

Books by the Author

Environmental Law in the Philippines (co-author), 1992
A Legal Arsenal for the Philippine Environment, 2002
The Laws of Nature and Other Stories, 2003
Shooting Stars and Dancing Fish, 2017

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1
PAINTINGS ON CAVE WALLS

Once upon a time …

There was a group of islands
so rich and beautiful
it was called the
Perlas del Mar de Oriente,
Pearl of the Orient Seas.

The land and the sea were
teeming with the 'birds and the bees,
the flowers and the trees.'
The air was clean and healthy,
and the waters fit to drink and plenty.

The island people of Pearl – the *Perlas* –
were happy.
Money they hardly had any.
Their only currency was harmony
with friends and family.

They worked only a few hours a day, and
spent the rest of their moments at play
with fellow creatures of the planet,
singing, laughing.
Under the care of Mother Nature
they all knew the human need to nurture.

In sum, they did not forget the
meaning of life.
It is all about moments:
Moments of peace, of friendship,
of meaning,
of the joy of being free
and feeling happy.

Invasion of the Mind

One day, pale men from faraway lands
came in big boats,
in clothes and weapons of steel,
carrying the cross of a different god.
And with both brought us to kneel.

They cut down the trees for wood,
trees that gave air, shade and food.
They fished the sea empty,
dumped their junk and made it dirty.

Not content,
they scraped the life off the soil
for black water they called oil,
Then threw out all the land as dirt
into the river,
all for a few pieces of shiny silver.

And then they called it progress.

Before long, the water and the air
became dirty,
unfit to drink and breathe
for both man and beast.
The life-giving soil could be planted no more,
so everyone had to buy food from
the store.

'That is progress,'
said these men from foreign lands to the
natives of *Perlas*:
'This is the source of your happiness.
It is called development and progress.
'It means taking more and more
and more and more,
even if it makes your home a bore.
'Even if it drills a hole into your head
So that you all end up dead.'

That is called progress.

One man was so disheartened
by the decay and destruction,
all in the name of progress.

He declared:
'I must leave, alone I shall live,
for my sorrows
I have the company of sparrows.'

00 1.15

So up the mountain he went
and entered a cave
until it later became his grave.

Years later, children went mountain
camping.
They discovered the cave of the
hermit's painting.
On the left wall of the cave
the children were delighted to see
magnificent pictures of sun,
sand and sea.

GDP

In the interior of the cave
where it was dark and dirty,
there, pictures of the present were so ugly.
But this is what progress calls pretty:
GDP -
Great Disaster for the Planet.

On the right side of the cave walls,
near its mouth where there was light
There, sketches, outlines and
unfinished drawings were
depicting and predicting,
perhaps hoping for a future painting
of what tomorrow would be …

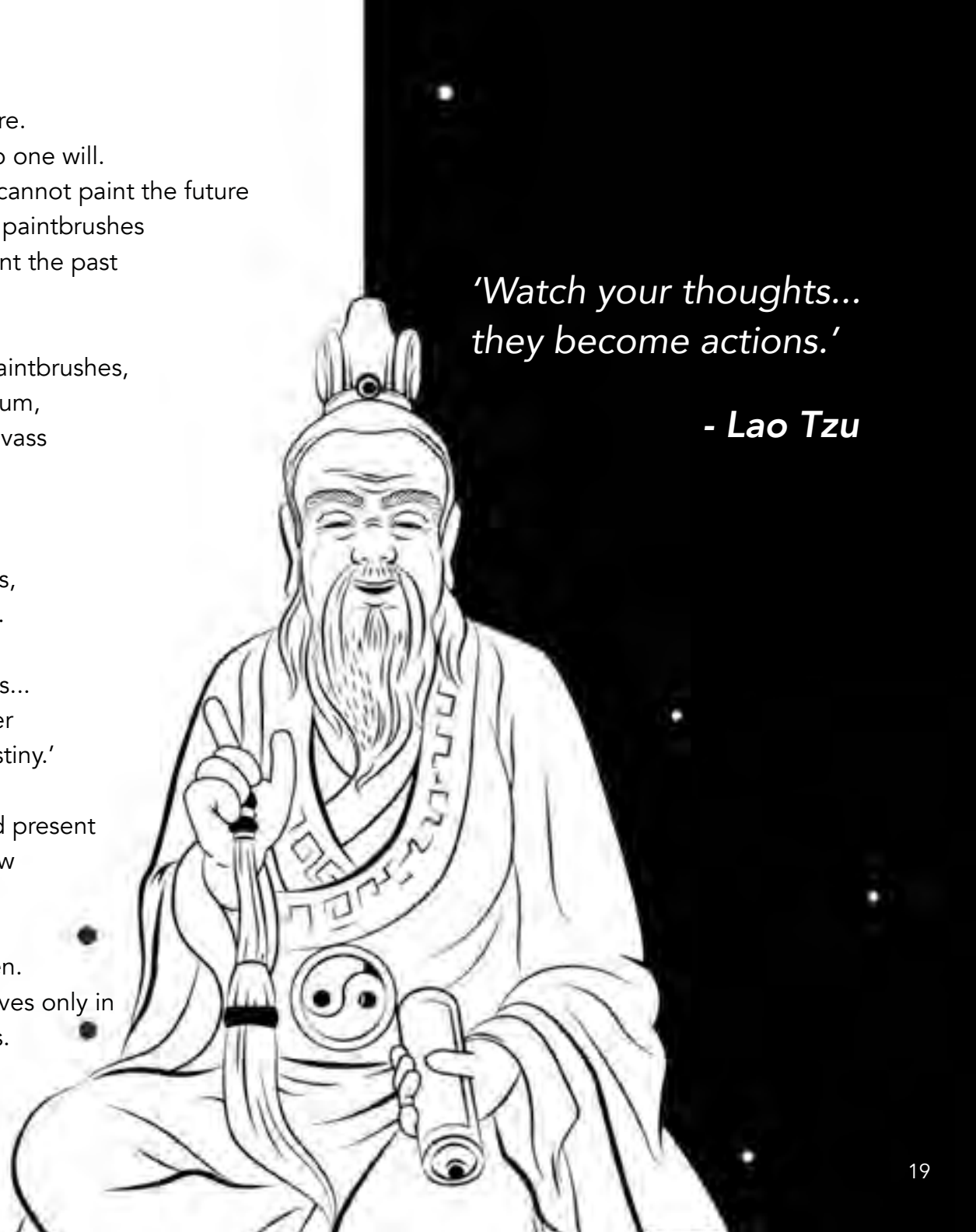
My friends, we have seen the past.
Today we see the present.
If the future is what it is today
It would not be one of beauty,
a place we'd want our children to be.

We cannot tell the future.
No one can, and no one will.
We only know that we cannot paint the future
using the worn-out paintbrushes
that we used to paint the past
and the present.

Thoughts are human paintbrushes,
Words are our medium,
our lives are the canvass
of the Art of Life.

A wise man once said,
'Watch your thoughts,
they become words.
Watch your words,
they become actions...
Watch your character
it becomes your destiny.'

Our destiny of past and present
and that of tomorrow
Are all the making
of our thinking.
But thoughts are unseen.
They show themselves only in
the World of Words.



'Watch your thoughts...
they become actions.'

- Lao Tzu

2
WORLD OF WORDS

Six people are in a room. We ask each one a question: What is the 'environment'?

The first one says it is about 'our surroundings.'

The second says 'natural resources.'

The third says it is about 'the animals and the plants around us.'

The fourth says 'ecosystems.'

The fifth one says, "Oh, it's the interaction between living and nonliving things, between plants and animals, and everything around us."

The sixth one says: "This is getting more confusing."

Six different people will have six different answers. Each one is right, but none fully embraces the meaning of the word.

That is the problem with the word 'environment.' It is in English, a tongue foreign to the inhabitants of *Perlas* and to many peoples of the world. It is thus difficult to grasp with our mind and even more difficult to understand with our heart.

In fact, it is not even an English word. The word 'environment' comes from another country that has words difficult to pronounce – France.

The French pronounce it *envee-ro-nuh-mungh*. This is from the word *'virer'* or to turn around. *'In viron'* means to encircle.

If you are having a problem with that, don't worry. Everyone else does. The concept generally relates to our surroundings but this meaning is too shallow.

Sometimes at the start of a talk, I would ask the audience: "Are you an environmentalist?" Very few, if any, would dare raise their hands. They are stumped by this word of many syllables. And to claim to be an environmentalist is almost like admitting to being a hippie.

Is the environment about the birds and the bees, the flowers and the trees? Or it is about Life, and the sources of Life in this single planet called Earth?

Yes, it is about precious sources of **Land**, **Air** and **Water**, easier to remember as **LAW**, the **LAW of Life**.

Where do we humans come in? We are one of the millions of life-forms – along with other plants and animals – that survive because of the sources of Life.

If the age of the Earth is 24 hours, humans in our shape and form came only in the last ten seconds. But we consider modern man the wisest, pretending to be doubly wise – *Homo sapiens sapiens.*

That is a claim that must yet be proven. Why are we the only animals that poison or destroy the land, air and water that give us Life?

Earth and the Human Body

Let us compare the Earth to the human body. The trees and forests are the heart and the lungs of the Earth without which we have no air to breathe.

The land and the soil are the skin and flesh of the Earth from whence we get our food. What did you have for breakfast? Bread, eggs, rice, fruits. Did they grow in the grocery? Or did they come from the land and the soil, and from the interplay of the LAW of Life?

The sea, lakes and rivers are the blood and bloodstreams of Life. Water makes up three-fourths of the human body and three-fourths of the Earth. Our blood, sweat and tears are

the salt of the human body as the sea is the salt of the Earth.

The Rule of Threes

If you don't breathe for three minutes,
the heart stops.
If you don't drink for three days,
the organs quiver.
If you don't eat for 30 days,
the body will wither.
And collapse forever.
Then you are no more.

Put poison in any of the indivisible three – in the land, air or water. Then it is only a matter of time before the poison enters our bodies and the curse of cancer eats away the life of many.

So, my friend, may I ask again: "Do you and your children want to breathe poisoned air? Drink dirty water? Eat poisoned food?"

If the answer is 'yes,' then it is time to bid you a very good night, sweet dreams and safe travels to another star.

If the answer is a vehement 'no' then we have more to talk about.

Everyone therefore is an avid environmentalist.

What does that mean? Like every living being, we all want to live and thrive.

So are humans really the most intelligent animals? We are among the tens of millions of life-forms from bacteria to buffaloes, the house fly to the flamingo. We are one of a kind – the thinking part of Nature.

Who are we, *Homo sapiens*? Are we a beast of the biggest burden – the burden of wisdom? (*Sapiens* is a Latin word meaning 'wise.')

If so, let us prove our wisdom.

Economy

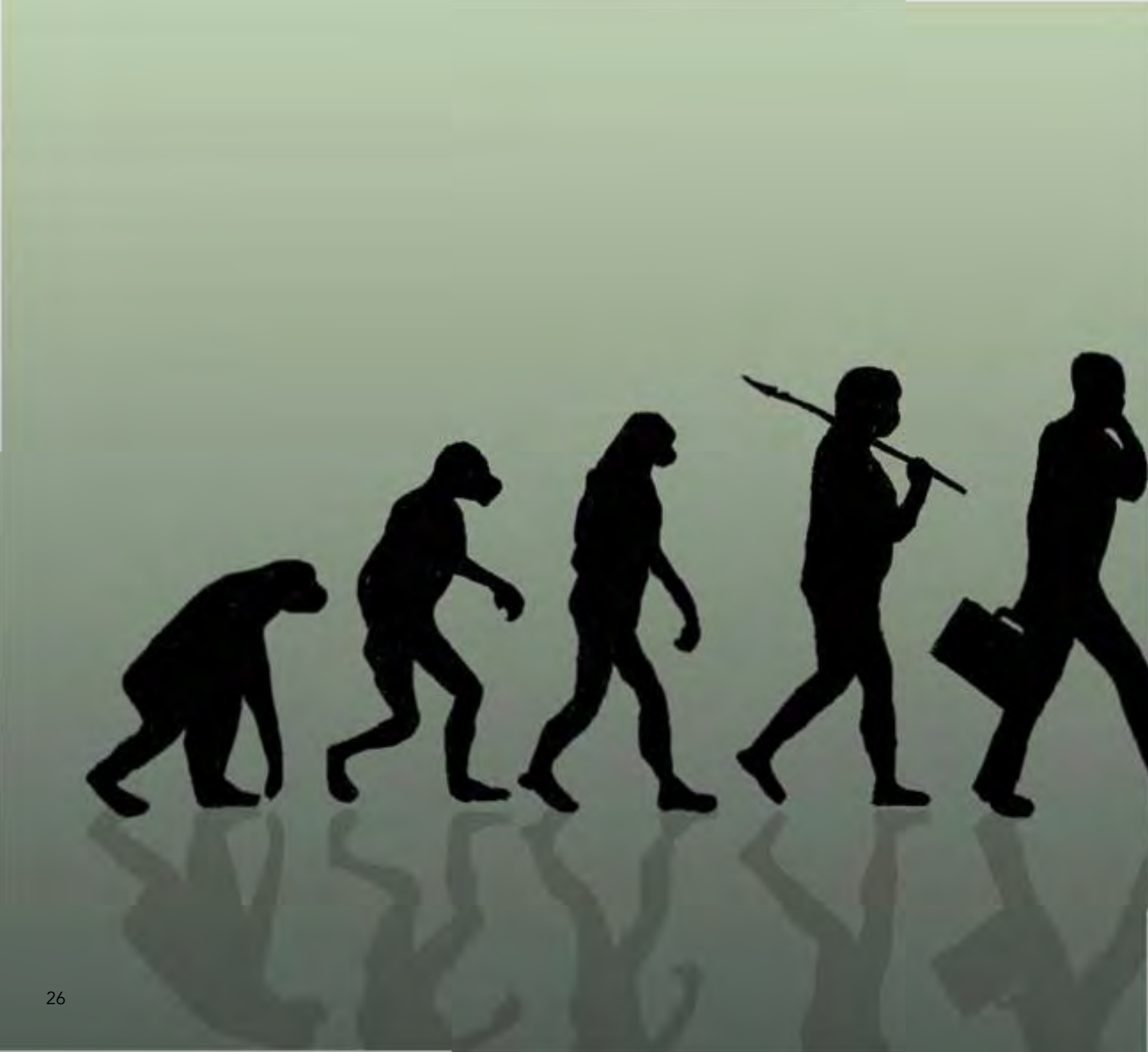
The world is crazy about the economy, chasing after economic growth and progress, headstrong and reckless.

What does that mean? Let us play a little game.

Imagine that I owned all the water, but sold it all to you. All that is left of the water is in your hands. I, on the other hand, am rich with five hundred billion dollars in the bank.

Can I drink my money?

In the art of argument and debate, this is the play where an adversary's position is reduced to absurdity – *reductio ad absurdum*.



3
RETHINKING OUR ROLE

What are we?
Who are we?
Why are we here?

If the Earth has a lifetime of 24 hours,
our kind – *Homo sapiens* –
the Thinking Animal only arrived
in the last few seconds.

Are we here to plunder the Earth?

Or are we, as wise animals,
caretakers and guardians of Life?

The Wedding Feast

Let me tell you another story.

In the island of *Perlas*, for one whole year
a family prepared for a wedding feast.
Special rice was planted and ripened as grain,
to feed the body and the brain.

Fruits and veggies did grow
green and healthy for all to glow.

One week before the wedding,
preparations began in earnest.

Everyone was getting dressed in their finest
and behavior was at its best.

Days before the wedding,
they began the finest cooking.

Then came the wedding day.
Everyone came, the young and the gray.

Man and bride arrived in horse and carriage
to be joined in the sacred rite of marriage.

Family and friends in love and laughter
wished them happiness forever after.
Together they all sang and danced
to celebrate man and woman's romance.

The guests are called to take their seats
to partake of the wonderful food.
Then one man comes in.
He had too much to drink.

The drunk goes to the table, kicks it over,
and food falls to the ground,
unfit for guests and goats.

The drunk then pulls out a knife,
stabs the bride and the groom dead,
as guests scamper off in dread.

Is the wedding party like the story
of Life on Earth?
The life of those here before our birth?

Who is the drunk?

Did he come from the world of aliens?
Or is he the *Homo sapiens*?

4
STORY OF A MARINER

Do you know this good-looking gentleman in the photo? Is he an actor? A military officer? Neither.

He was my grandfather, a hardworking merchant mariner who later became a harbor pilot in a major seaport.

When he passed away at the age of 82, I was a young man in second year law school. A few days after his funeral, his lawyer called me to his office. There, he told me that since I was a favorite grandson, my rich grandfather had left me an inheritance of 10 million dollars.

Stunned, I received the money and deposited it in the bank. The day after, I withdrew one million dollars and brought my friends to the casino, where we got drunk and gambled all the money away. The next day, we repeated the spending spree.

Five days later, I realized that I only had $100,000 left. What my grandfather had saved up all his life, I squandered in one week.

To cover my tracks, I told my accountant to record all my gambling losses as income. I also directed him to report that I was making good progress in my life.

Is that correct accounting? Of course not. Any accountant who did that would bring his client to financial ruin. He would be stripped of

his professional license for gross and utter ignorance.

But is that not what the economists of the world are doing to the Earth?

The Earth took four and a half billion years to become what it is now – a ball of wondrous Life and life-forms, all made possible by the delicate balance of land, air and water.

Human beings, in our present shape and form, only came into being in the last few seconds of the Earth's clock. Like any animal, we have lived off Nature's bounty. We started as food gatherers, then became hunters and farmers.

The Industrial Revolution happened only about 200 years ago. This started an era where people, the latest of the Earth's transient animals, used sources of life – Land, Air and Water – faster than these could be replenished.

In less than 200 years, we cut down almost all of the trees that took all of time to grow. We removed life-giving soil and disemboweled the Earth. We threw away the water that got

in the way, only to take out a few pieces of shiny metal.

We took out most of the fish from the seas and rivers, then dumped poison into bodies of water.

And called this economic progress.

Plunder

The mind-set of human economics is to take out as fast and as much as possible the life sources and life-forms from the Earth. We use them up quickly, and then throw what's left away.

This is the mind-set of extraction and consumption or ex-con economics. (Ex-con also stands for ex-convict.) With its impact on the Earth, this economic thinking hereby stands charged and declared guilty of the crime of 'planetary plunder.'

How do we get out of this? We think the opposite way.

CPR Economics

Albert Einstein, one of the great thinkers of the last century, said that we cannot solve a problem using the same kind of thinking that created the problem.

If so, what is a different way of thinking?

The opposite of extraction and consumption is Conservation, Protection and Restoration (CPR).[1] A 180-degree turnaround of Ex-Con Economics is CPR Economics.

CPR also means Cardio-Pulmonary Resuscitation of the vital organs of life – Land, Air and Water – the LAW of Life.

Fact, Fiction and Fantasy

Oh, the story of my grandfather?

It is said that the best stories blend fact, fiction and fantasy.

The fact is that my grandfather was really a merchant mariner and a harbor pilot. The fiction is that he was very rich. The fantasy is that I inherited ten million dollars and squandered it in one week.

But is that not the fantasy world we live in today?

The Earth took 4.5 billion years to become what it is.

In the last few seconds, our kind comes in stone drunk and kills off everything in sight. We also poison the Land, Air and Waters that make life possible.

Then we celebrate it as 'economic progress.'

True Story

The real story is that my grandfather – Captain Canuto Oposa (Papa Oto to us) – was a harbor pilot in a major seaport of Cebu island in central *Perlas*.

As an infant barely a month old, I was given to his and my grandmother's care. My parents had to go abroad to seek medical care for my mother who had throat cancer while I was in her womb.

In his job, Papa Oto would guide big boats in and out of the harbor, especially foreign vessels unfamiliar with the local depths and tides. He would take me along to ride small tugboats that would meet or send off the big boats. Perhaps, that was when I first touched the sea. Or was it the sea that touched me?

Papa Oto owned some properties. When he died, he left me a small coconut farm in the remote island of Bantayan. The land faces out to the fabled Visayan Sea, the heart of the richest marine waters on Earth.

At that time, it was a useless piece of land. There was no running water, no electricity, not even a marketplace. It is quite far and even until today the travel is quite taxing. To get there, one has to cross an unpredictable and sometimes rough sea for over an hour.

No, I did not receive ten million dollars. I inherited much more. It was not money, it was something more precious – a love for the sea and the value of thrift.

Papa Oto did not tolerate any waste of water. A leaking faucet would irritate him. Once, he asked me to tighten a dripping faucet.

I said, "That's OK, Papa, that's only a few drops."

"Yes," he said, "those are only a few drops now, but after the whole night, that will fill a bucket. If you waste water, one day you will have to buy it."

To a boy of 7, the loss was no big deal. There was a lot of water. Or so I thought. The idea of buying water was like buying air – impossible and funny.

Ignoring this warning about water waste got us where we are today – we have to buy clean

Bantayan School of the SEA

water to drink. Is buying clean air not far behind? Perhaps the childhood lesson of thrift was the seed planted by Papa Oto that grew to become the tree called 'conservation.'

What does that word mean? It means 'not wasting anything.'

Song of the Sea

The narrow beach strip where Papa Oto had a small cottage has since multiplied in area and value. Despite several offers to buy the land for incredible amounts, it is kept free of man-made structures. More than 99 percent of the area is left in a state of wonderful wilderness.

Neighbors and agents have called me a fool for not cashing in on the real estate bonanza. But why shouldn't it stay in a state of raw beauty? Maybe it would make a difference in how people view the open sea in full splendor. Maybe it would inspire them to take better care of the *Perlas del Mar de Oriente*.

Today, that long stretch of white sand and blue-green water are a rare sight. No seawall, no commercial structure or resort, and no tourist traffic – just open space. When people come by, they pause, stunned by Nature's pure beauty.

"Wow, it doesn't look like any other part of *Perlas*," says the visitor.

"No," I reply, "this is what *Perlas* is like if we only take care of it."

SEA CAMP

At sunrise, gentle waves touch the shores, and the sky is ablaze with the colors of dawn. Birds wake you up with their tweet and song. The wind caresses skin and soul.

This is the location of the School of the SEA (Sea and Earth Advocates) in *Perlas*. In the no-frills beach camp, one experiences and learns how to live in harmony with the Earth.

People who come – by invitation only – have to fetch their bathwater from an old-fashioned well in the compound. After carrying pails back and forth, they understand how precious fresh water is and will not waste it. For meals, they have to harvest vegetables. And before they leave, they have to plant. This will impress all with the truth that we can take from the Earth, but must give back.

In the seaside camp, there is no solid waste. All used materials are separated as 'wet' and 'dry' to be turned into compost or reused or recycled.

At the SEA Camp, volunteers make 'fish condominiums' out of limestone and cement on bamboo frames. Drop these in the sea and they become friendly shelters for fish.

Plastic is shredded and mixed with concrete to make marine buoys and fish 'condominiums' to be dropped into the sea as fish shelters.

Classes can quickly move from indoors to the garden, and then hop onto a glass-bottomed boat to behold the beauty of life underwater. Since the sea in front was turned into a marine sanctuary, the fish are plenty.

At night, after dinnertime, we turn off all the lights to enjoy the splendor of the stars. We sit under the canopy of the heavens and are humbled by the immensity of the universe. In the darkness we are able to see shooting stars, something we no longer find in the nightscape of a city ablaze with lights.

When the tide is high, we go to the beach for a one-of-a-kind show. In the darkness, we beam a powerful flashlight on the water that teems with fish, and see them jump out in different shapes and directions. It is a sight to behold. I call this the 'Dancing Fish Extravaganza.'

With volunteers and friends, the beach camp has shown thousands of young people, schoolchildren, fishermen, teachers, government people and ordinary citizens how to live in 'a balanced and healthful ecology in accord with the rhythm and harmony of Nature.'[2]

A Step Back

The sea in front of the beach camp was declared a marine sanctuary in 2004. After years of patient and vigilant caretaking as a no-take zone, it was beginning to blossom with multi-colored corals and a wide array of marine life.

Then came Typhoon Haiyan (local name Yolanda) on Nov. 8, 2013. It was the world's most powerful typhoon to make landfall.

Shortly after, concerned friends asked me, "What happened to the School of the SEA? Was it damaged?"
"No," I answered. "It was erased."

It took more than a year, with help from friends, to rise from the disaster. Vegetation recovered, and the birds are back in the nearby wetlands. Of the nine structures in the compound, only one withstood the 320-kilometer-per-hour winds – a Climate Change House built on concrete stilts and set back from the beach line by about 100 meters.[3] It has since been repurposed into an Art Center for the Earth.

The School of the SEA is taking on new life as the SEA CAMP – a program for Sea and Earth Advocates of Culture, Arts and Music for the Planet.

In the summer of 2016, a crack team of environmental lawyers and actionists (I avoid the word 'activist') underwent a 3-day training there. It took more than one generation to put this team together, and turn a dream into action.

On Earth Day, April 22, we also closed off several hectares of freshwater wetlands to be protected as a bird park.

Postscript

Little did Papa Oto know how he ignited adventures for a boy who later used a career in law to defend non-paying clients – trees and birds, flowers and fish.

The experience of sea camping must have also inspired the next generation. My eldest son Juan Antonio, a lawyer, focuses on renewable energy law. My only daughter Anna has taken on the idea of the SEA CAMP. As 'Chief Mermaid' of the Save Philippine Seas movement, she holds trainings for young people all over the country. Third son Uli takes care of a wildlife refuge. As assistant manager of an island resort hotel, he has done wonders to reduce solid wastes disposed through excellent waste segregation. My youngest teenage son Kiano is an animal lover and has taken an interest in the bird park.

Part of the wetlands in Sta. Fe, Bantayan is set aside for a bird park.

Indeed, Papa Oto and Mama Ing left me an inheritance worth more than $10 million – much more.

5
ECONOMICS AS TUBERCULOSIS

Are the United Kingdom, United States and Japan examples of developed economies? Yes, of course. Why? Because they consume more energy and materials.

Consumption is the measure and model of 'economic development' for the world. Economic progress is measured according to the mythical level of per capita income and corresponding levels of consumption. What is a synonym of the word 'consume'? Waste.

Let us define 'economics.' In one textbook definition, it is 'the efficient use of scarce resources.'

Why are some countries called 'developed' or 'developing'?

Answer: Because the developed countries consume more energy and materials. This has two dangerous underlying meanings. First, that developed countries are superior to

developing countries. Second, that developed countries are a model to be copied by countries that should consume as much, if not more, energy and materials in order to catch up.

DISCUSSION AND ARGUMENT

Argument One:
Are developed countries superior?

Excuse me. So-called developing countries like *Perlas* already had highly developed societies when people in 'developed' countries were still killing each other. They killed their own people and then they killed each other and their neighbors in never-ending wars. They did so for power and control, and in ways so vile and brutal the stories cannot be told over family dinner.

By the way, who started the two world wars in the 20th century which led to the deaths of more than 100 million people? Was it the developing countries?

Argument Two: One Earth

If developing nations aspire to progress, should it follow the model of consumption and waste by the 'developed countries'?

One study by environmental scientists estimated that if all seven billion people on Earth were to copy the lifestyles and wasteful ways of 'developed countries,' we would need the resources of **ten Earths**.[1]

The last time you looked, how many Earths do we have?

The word 'consumption' has two other meanings. To consume is not only 'to use' but to 'use up.' A synonym or another word meaning for consume is 'waste.'

In medical terms, 'consumption' is Tuberculosis. It is a serious and life-threatening disease caused by the bacteria *Tubercle Bacilli* which eats up and wastes away the lungs and heart, and then other life-giving organs of the human body.

The one and only Living Earth

' I don't understand why
when we destroy something
created by man we call it ***vandalism****,*
but when we destroy something
created by nature, we call it ***progress****.'*

- Ed Begley Jr.

Remember how the Earth can be compared to the human body? The trees and forests are the heart and lungs of the Earth.

Who is the bacteria
that is eating away and wasting the forests?

Who is poisoning the air that we breathe?
Who is poisoning the water?
And who is scraping off the life
of the soil for a few drops of oil?

What is the bacteria that causes the disease?
We must search for it pronto!
Ahora mismo!

There it is. The supposedly thinking animal,
human beings.

They act like a bacteria eating away
at the vital organs of the Earth,
the land, air and waters upon which
all Life depends.

The bacteria is called
Tubercle homo-cilli.

This bacteria must be
given some thought.

It is in its nature to think.
If not, we end up
with nothing to drink.

An Oxymoron

Is waste 'good' economics?

To repeat, economics means the most efficient use of scarce resources. That makes today's standard of a developed economy an oxymoron or a contradiction of terms. The economist who still dares to call a waste-driven country a 'developed' economy is an oxygen-deprived moron.

From now on, let us call out the culprit.
Let us stop calling wasteful countries
'developed' economies.
From now on, let us call them
Over-Consuming or OC countries.

OC also stands for obsessive-compulsive,
a psychological disorder, whose symptoms
include excessive desire for control
and an excessive hoarding of material things.

We in the islands of *Perlas* belong to
the Low-Consuming or LC countries.

OCs should copy LCs.
Instead of taking and taking
from scarce and limited resources,
LCs will teach OCs
the art of giving, of sharing
and of living.
Another meaning of LC is
Loving and Caring.

A Call to Action

My friend, I call upon you to take action.
From now on,
If you hear anyone call countries

'developed' or 'developing'

please raise your right hand
like you would in the classroom
and then declare
like a top-caliber lawyer in a
court of law,

"Objection, your Honor, misleading!"

Then, you may say:

"I respectfully beg your pardon, Mr. Speaker.
I do not mean to disrupt the discussion.
But I must disrupt the kind of thinking
that is causing today's great miseries."

And then you can read excerpts from
Argument One and Two.
They are your weapons of choice,
words and meanings to change
thoughts and actions.

If Ex-Con Economics – progress and development measured in today's reckless extraction and mindless consumption – is bad news, what is the good news?

Conservation, Protection and Restoration (CPR), the Cardio-Pulmonary Resuscitation of the vital organs and sources of Life on this one Earth is the good news. We can also call it Restoration Economics, the kind of economics that seeks to restore:

1 The Land, Air and Waters – the LAW of Life

2 The lost connection between man and Nature

3 The threads in the fabric of human society

4 The common sense goal of Life – the experience of happiness.

On this, a story will be told better, a bit later.

When we change words, we change meanings.
When we change meanings, in the end, we change the mind.

6
PERLAS DEL MAR

Somewhere in the great ocean there is a group of islands so rich and so beautiful it is like Pearls of the Sea – *Perlas del Mar*. The name of the country is like the name of its people: *Perlas*.

While small in land area, it is one of a handful of countries in the world that holds almost all of the life-forms – true biological wealth – on Earth.

We learn about Charles Darwin in grade school biology. He studied life in a group of islands called the Galapagos off the coast of Ecuador in South America. The islands are so

"Megadiversity: Earth's Biologically Wealthiest Nations" published in 1997 describes 18 countries that hold almost all species of plant and animal life. The clown fish in the book's front cover represents marine life in the Perlas group of islands.

Sardine Run in Moalboal, Cebu

rich in the variety of plants and animals that Darwin developed the theory of the evolution of life-forms on Earth in his book *Origin of the Species.*

How does *Perlas* compare to the Galapagos Islands? Is it 10 percent? Is it half as rich? Maybe equally rich as the Galapagos Islands?

Not quite.

The variety is 'tenfold.' The person boasting about the wealth of *Perlas* is not from that country. He is an American professor of a museum of natural history of one of the world's most prestigious universities.[1] In ten hectares of forests in the Philippines, here known as *Perlas*, there are more species of trees found in these tropical islands than in the entire continent of North America.

The Sea

If the land is rich, the sea is even richer. A 2005 international study showed that the central Philippine seas is the richest marine waters. Dr. Kent Carpenter described the area as the 'center of the center of marine biodiversity on Earth.'[2]

In just ten hectares of the *Perlas* seas, there are more species of corals and fish found in its waters than in the entire Caribbean Sea, an area of more than 300 million hectares.

But this incredible wealth is little known to the people of *Perlas*. Sadly, they have done everything to destroy their coral reefs and marine wealth – all in the name of economic progress and development.

Wildlife in Cebu:
(From top left)
Cebu Hawk Owl
Cebu Frill-Winged Damselfly
Pied Triller
Emerald Dove
Green Sea Turtle (Pawikan)
Whale Shark

'As a gauge of biological diversity, it is reasonable to think of the Philippines as the Galapagos Islands multiplied tenfold.'

- 1998 study by the Field Museum of Chicago

7
WAR STORIES

We cannot have peace on Earth
Unless we have peace with the Earth.

7.1 Children and Forests

In less than 100 years, Perlas' forests were gone.

In the 1980s, there was much debate on the deforestation of the Philippines. I uprooted my family from Cebu City in central *Perlas* in 1988 and moved to Manila to explore the still-unknown field of Environmental Law.

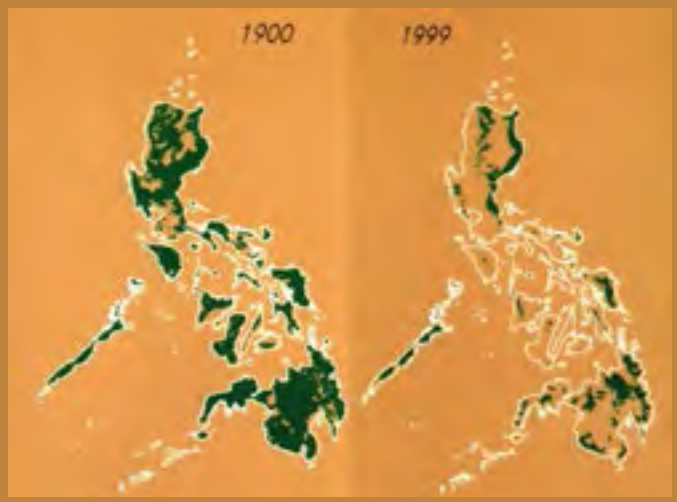
These were the stark facts[1]:

1. The land area of *Perlas* is 30 million hectares.

2. Barely 50 years earlier, there were 16 million hectares of virgin rainforests – more than half of the land area.

   In the year 1900, forest cover was estimated at 21 million hectares, covering 70 percent of total land area.

3. Based on government policy and the slope of the land, at least half of the total land area or 15 million hectares must be devoted to forest cover to prevent erosion. The other half may be for other land uses, e.g., agricultural, residential, comercial, etc.



Maps of forest cover by the Institute of Environmental Science for Social Change, Ateneo de Manila University.

4. In 1988, there were only 800,000 hectares of virgin forests left.

5. Because of an outdated government policy, logging was done only in virgin forests.

6. Forests were being cut down at the rate of 120,000 hectares per year.

7. At least 92 logging companies were given permits to operate in 3.9 million hectares.

I was alarmed. In less than eight years, we would practically wipe out the remaining old-growth forests of the country. My concern grew after I spoke with the holder of a logging permit. He said there were no more forests in their concession area. So they would go to other areas to cut down trees and just pay off government authorities.

Something had to be done. If we left things like this, I wondered about what would be left for the next generation. I thought of my children – toddlers aged 3 and 2, and a 9-month-old infant.

In Congress, the debate on logging was heated. Many members of the House of Representatives were holders of timber license agreements (TLA) or logging concessions. The issue was untouchable. In the Senate, two well-meaning senators debated on whether to ban logging totally or selectively.

Environmentalist-friends and co-workers lobbied in the media for a stop to logging. It was the classic debate between priority for the environment versus the economy. One side argued for business-as-usual for the jobs and revenue for the economy. On the other side, were the environmentalists, a tiny minority who worried about flooding and cared about preserving what remained of old-growth forests. They were looked upon as slightly better than hippies. No resolution was in sight.

Telling a Story

Soon after I became a lawyer, I realized that I wasn't cut out for the life of a legal luminary. Deep inside, I knew that I could only be a storyteller.

Words are my paintbrushes, the Law is a medium, and the Court can be the canvass of the art of storytelling.

Lake Danao in Leyte, Perlas

I decided to file a case to cancel all logging concessions in the country. I argued that at the rate we were cutting down forests, there would be nothing left for my children to see, and other children of their generation and those yet unborn.

Where could I find legal basis for it? I asked my lawyer friends. They all said it could not be done.

One night, I was with three friends – a forester, an artist and a layman. The forester said that there was a clear and present danger. The lawsuit must be filed. The artist said, "Go ahead." How? '*Bahala na si Batman* (Leave it all to Batman)!'[2]

Risky, ridiculous, insane, yes. But it was a story that had to be told so I filed a taxpayers case in a

trial court in 1990. The plaintiffs in the class suit were all minors represented by their parents.

A dozen lawyers joined me in filing the petition.

The case was later dismissed without a hearing. The court granted the motion to dismiss of the National Government for 'failure to state a cause of action.' In other words, I did not have a case.

Failure is an Orphan

When the case was dismissed, the other lawyers disappeared. Even my own shadow left me. Yes, failure is lonely.

It was a difficult decision. Will I move on with other cases in my fledgling law practice or should I continue a 'useless' case that no one was interested in and was costing a lot of time and money?

But I was not happy about not being able to present evidence in court about what was happening to our forests. According to the State, the people (and the children) had no right to sue the government. In legal language, the petitioners had no legal personality to sue or standing to take this action.

I was a young lawyer with a young family struggling to make ends meet. The cost of going forward with an appeal to the Supreme Court was daunting. I was alone and ashamed to say I had lost. The lawyers I earlier consulted would only say: "I told you so."

But the story needed to be told. So I went ahead and filed an appeal with the Supreme Court. I did not even know how. If I had been smarter, I would have known that one cannot go directly to the Supreme Court and must first go to the Court of Appeals.

In the words of Mark Twain, in order to dare do something, one must be ignorant and confident. I was both, a perfect combination for disaster.

It look two years for the Court to decide on a question that was simple to me: If we wiped out our forests, what would be left for the future? It seemed common sense. But the Law is hardheaded.

The Decision

After several motions for extension to file comment by the Government's lawyer (the Office of the Solicitor General), the Supreme Court finally decided that yes, the children-petitioners had the right to sue.

When I received a copy of the decision, I only looked at the last part, the summary and the action point called the 'dispositive portion.' It said that I should go back to the trial court and implead all holders of Timber License Agreements (TLAs).

Go up alone against 92 logging companies with their battery of top-notch, highly paid lawyers? No way, I told myself.

I knew beforehand that would be mission impossible. Now here was the Supreme Court ordering me to include all logging companies as defendants in the case, and start all over again.

I was so disappointed that I did not bother to read the full decision. I just glanced at the concurring opinion written by Justice Florentino Feliciano, who later became a judge of the Appellate Court of the World Trade Organization (WTO). He said this was 'one of the most important cases decided by this Court in the last few years.' He said the 'seminal principles in the decision are likely to influence profoundly the direction and course of the protection and management of the environment…'

I was amused. What was so 'seminal' about having to do the case all over again and implead an impossible number of defendants? It was time to cut my losses and move on.

Only much later, when I read the whole decision, did I realize that it was quite bold. The High Court set aside the trial judge's earlier order dismissing our class suit. The ponente or writer of the 1993 decision was Justice Hilario Davide Jr.

Perhaps it was the case of a seed landing on good soil. Davide, a Cebuano, is the son of rural schoolteachers and has a heart for the Earth. He was a member of the commission that framed the 1987 Philippine Constitution and its provision on the environment.

Thus, Davide wrote from the heart. He was eventually appointed Chief Justice of the Supreme Court.

Under Article II of the 1987 Constitution, "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature."

Legal Standing

The question of legal standing was placed front and center in the case before the Supreme Court. I had insisted that the children-petitioners and children yet unborn had legal personality to sue.

I argued that in the Rules of Court, the 'real parties in interest' in a legal dispute are those who stand to suffer irreparable damage and irreversible injury. In my view, this applied to my clients. If we depleted the forests now, wasn't that irreparable damage to them?

This to me was common sense. It was only after I had lost the case in the trial court and while it was on appeal before the Supreme Court that I came across the work of the eminent law professor Edith Brown-Weiss of Georgetown University Law School. She had already written the book *In Fairness to Future Generations* in which she coined the term 'inter-generational responsibility.'

On the standing of children, the Supreme Court in its en banc decision said this was 'a special and novel element' in the case:

"Their personality to sue in behalf of the succeeding generations can only be based on the concept of inter-generational responsibility insofar as the right to a balanced and healthful ecology is concerned. Such a right, as hereinafter expounded, considers the 'rhythm and harmony of nature.'"

The High Court said the rights to a balanced environment were 'assumed to exist from the inception of mankind' and do not have to be laid down in the Charter.

Nevertheless, these rights are explicitly mentioned in the Constitution because *"unless they are mandated … the day would not be too far when all else would be lost, not only for the present generation but also for*

those to come – generations which stand to inherit nothing but parched earth incapable of sustaining life."[3]

The stirring lines of the Supreme Court's decision have since resonated in many countries. I am slightly embarrassed every time the case is mentioned because it was a case that was actually lost.

Maybe the message of the case reached many because of its simplicity: If we use up everything today, nothing will be left for our children and others still to come.

But I guess that is the difference between the obscure and the obvious. *'The obscure is figured out sooner or later. It is the obvious that takes a lot longer.'*

Logging Ban

The Secretary of the Department of Environment and Natural Resources at the time was Fulgencio Factoran Jr., a brilliant lawyer, human rights activist and a law graduate of the University of the Philippines with a Master of Laws from Harvard Law School.

He was named defendant in the case because of his position. But he actually supported the objective of the case.

I think he was the best Environment Secretary ever. He used the case as leverage for dramatic reform.

While the case was pending in the trial court, Mr. Factoran ordered a ban on logging. He issued Department Administrative Order No. 24, series of 1991 which said that effective January 1992, all logging in the remaining virgin or old-growth forests would be prohibited. The outmoded policy of allowing logging only in virgin forests was a carryover from the time when the country was still full of forests. Now there were only 800,000 hectares left.

The short-term goal of my petition was to cancel all logging permits in the country and protect the few remaining old-growth forests. With DAO 24, logging could only be done in second-growth forests. With that administrative action, therefore, the objective of the case was already achieved.

While I was battling my case in the Supreme Court, a landmark piece of legislation was passed in June 1992, the National Integrated Protected Areas System Act. Under this law, the remaining virgin forests would fall under the category of protected areas of *Perlas*.

The Next Generation

It took another 20 years – one generation – for all logging to be stopped. In 2012, the President of *Perlas* banned all logging in natural growth forests. As this book was being written, an El Niño was sweeping the whole of *Perlas*, escalating heat and a drought in the summer of 2016. We see the prophetic words of the Court unfolding: 'a parched earth incapable of sustaining life.'

But yes, the tide is shifting. The reforestation program that Secretary Factoran started in the late '90s blossomed into a multi-billion-peso National Greening Program being pursued today. More people now dare to care for trees and forests.

Lesson learned: Do what you must with a little brains but with all your heart. Sometimes, when you least expect it, the stars will align.

7.2 Battle for Manila Bay

In the waters of *Perlas* is found the 'center of the center of marine biodiversity on Earth.' Look at the map: The red portion has the most abundant variety of marine life in the world.

At the apex of that red area is Manila Bay, a crown jewel.

Yet what have we done with it? In the late 1990s, I discovered that all the raw sewage of Metro Manila – about 16 million liters a day – was being dumped in the Bay. Nine out of the ten things found by fishermen in the natural harbor were just garbage like plastic, rubber slippers, Styrofoam, etc. Manila Bay was being used as a garbage can and toilet bowl.

It was time to tell another story.

To avoid the use of my name as a petitioner (like the children's case for the protection of denuded forests), I suggested to my law students in the University of the Philippines to stand as petitioners. They agreed. The case was titled Concerned Residents of Manila Bay represented by lead petitioner Divina Ilas joined by some of the bay's marine residents – *tahong* (mussels) and *talaba* (oysters).

The seas of the Philippines hold great wealth as the epicenter of marine biodiversity on Earth.

We proposed a new theory of inter-species responsibility. This theory states that because humans are supposedly the most intelligent

animals on Earth, we must take care of the animals of lesser intelligence, such as mussels and oysters.

The legal basis for this cause of action to clean up Manila Bay was straightforward. The Environment Code, a decree issued by then President Ferdinand Marcos in 1977, clearly states that where a body of water is dirty, the concerned government agencies must clean it up.[4]

We included as many government agencies as we could. It was a logistical challenge since this was another pro bono case and self-funded adventure in 1990. We had to serve notices to all 11 agencies.

The case went through the judicial mill from the Regional Trial Court, to the Court of Appeals, all the way to the Supreme Court. Special thanks goes to top-caliber lawyers Sigfrid Fortun and Beda Fajardo. Sig, who happens to be my brother-in-law, and his associates helped a lot with the day-to-day management of the case in filing motions and pleadings. I was often out of town and the student-petitioners had all graduated, become lawyers and had careers of their own.

Manila Standard TODAY

FRIDAY, December 14, 2001

SC orders Manila Bay cleanup

Justices deplore 'abject official indifference' to the slow death of a historic waterway

By Rey E. Requejo

PHILIPPINE DAILY INQUIRER

Clean up Manila Bay, SC tells gov't

By Norman Bordadora

In the hearing of the case in the Supreme Court, I was assisted by other top-notch lawyers. By coincidence, my soul brother, the legendary environmental lawyer Mahesh Chander (MC) Mehta of India, happened to be in *Perlas* while the case was up for resolution. He played an important role in enlightening the Court on the idea of a 'continuing mandamus.'

After almost ten years of litigation from January 1999 to December 2008, the Supreme Court ordered all the defendant government agencies to clean up Manila Bay. They were also required to submit a time-bound Action Plan and report their progress directly to the Supreme Court every 90 days.[5]

Had this been a case for a paying client, I would have earned enough to pay for my children's college education. But then fish do not pay attorney's fees.

So what was achieved after ten years of hand-to-hand legal combat? We got an order stating that the Government must do what it should have done 30 years ago.

Was that a win or a loss?

I really do not know. I do know that government agencies have been submitting their quarterly reports. Maybe 90 percent of the report is hot air. Then again maybe 10 percent is true. Otherwise, the agencies could be held in contempt for submitting a falsehood to a court of law.

Is Manila Bay cleaner? I cannot say so with scientific certainty. But it is heartwarming to see people casting fishing lines off the breakwaters near the Cultural Center of the Philippines. They actually catch fish (though I wouldn't dare eat it.) If this is any indication of cleaner waters and some restored marine life, maybe the government agencies are actually doing something.

Whether it is enough to make the Bay safe for swimming in the next generation remains to be seen. I did my share and told a story. Perhaps that is enough for now.

Citizens can still step up and sustain the momentum.

'A lawyer who defends the Earth has God for a client.'

- Odette Alcantara

LESSONS LEARNED

1 Telling a story in a court of law can and will spark some action.

Awareness without action is like a bow without an arrow.

2 The journey is its own reward.

Whatever happens in the end – sooner or later, win or lose, one way or another – is a bonus.

3 Nothing that is worth doing can be achieved in one's lifetime.

Thank you, Tita Odette

During the ninth year of the Manila Bay case, I was feeling burned out. So much effort, with absolutely no reward, not even psychic income. I was tired and broke. I had given up my commercial (and revenue-earning) law practice to focus on my passion, a decision I made in Sept. 8, 1998, four months before I filed the Manila Bay case. Every motion, every hearing, every pleading that was filed cost a few thousand pesos that I did not have.

One day when I was very weary, I called up a more senior friend, Odette Alcantara, who was Mother Nature personified. We fondly called her *Tita* (Auntie). She was a writer, artist and environmentalist.

I asked, "*Tita* Odette, what am I doing? I'm a lawyer, a graduate of this and that school, recipient of this and that award, and here I am, battling a case for almost ten years, with hardly any end in sight and with no reward whatsoever. Am I doing right?"

To that she said, "Don't worry, Tony, a lawyer who defends the Earth has God for a client."

Tita Odette, you are in some star now, smiling at us and at your *niño favorito* (favorite child) as we struggle with our foibles, and with the stupidity and beauty of earthly life. For your words that inspired me to go on, and which I have shared with many since, *daghang salamat!*
(Thank you so much!)

7.3 Other (Mis) Adventures

FOREST LINES

How can we protect something if we don't know where it is?

This question nagged me about the remaining forests in the country. The framers of the 1987 Philippine Constitution saw this as well.

So the Charter says that "The Congress shall, as soon as possible, determine by law, the specific limits of forest lands and national parks, marking clearly their boundaries on the ground."[6]

In 2004, after 17 years, Congress had not done this.

If pro is the opposite of con,
Is progress the opposite of congress?

If Congress has not done its job, can it be compelled to act by a court order for mandamus?

We wouldn't know unless we tried to find out.

The issue had to reach the attention of concerned parties like the Department of Environment and Natural Resources (DENR) and Congress.

In other words, the story must be told in a court of law.

To test the idea, I filed another petition in 2005 to force Congress to define the boundaries of the country's parks and forests. The national lawyers' association wanted to join the petition. I declined, knowing this was a risky case. I thanked the president, who was my friend, for his interest. If the case failed, I knew I would be blamed by the whole organization.

Within 24 hours from filing, the Supreme Court took action: Case dismissed!

"If you can meet with Triumph and Disaster and treat those two impostors just the same…" wrote Rudyard Kipling. I laughed and moved on. It was enough that the message was sent: We cannot protect something if we do not know where it is.

It was for DENR and other agencies to take action. What happens after, well, as the song goes: *Que sera, sera* (What will be, will be).

To my surprise, seven years later, I read in the newspaper that the DENR had completed the delineation of boundary lines of forests and protected areas of the country, a total of 79,245 kilometers.[7]

Thank you.

LESSONS LEARNED

1 Do not be afraid to tell a story.

2 Win or lose, laugh!

3 Throw a pebble into a pond.
You never know how far
the ripples will go.

RECLAMATION OF MANILA BAY

In the early 1990s, there was a frenzy to build flyovers in a mistaken effort to address traffic. One massive vehicle overpass was planned for the junction of the boulevard that runs along the Manila Bay.

The flyover was just a prelude to opening up the remaining portion of the bay for reclamation. Part of the sea would be covered with filling materials and 'developed.' This got the goat of the Tourist Belt Businessmen's Association that was headed by a feisty lady. They asked me for help.

Bulldozers were coming in. The protestors circled the trees in a human chain to protect the trees from being uprooted. There were claims that an anomaly marred the award of the contract. I told the group that I didn't know much about bidding and contracts. Instead I asked if the project had an Environmental Impact Assessment (EIA).

What's that?

In the past administration, then President Marcos issued a decree requiring all major

Sunset over Manila Bay

government and private projects to prepare an EIA and secure an Environmental Compliance Certificate. Nobody had bothered to implement this 15-year-old law. But it was there in the law books, languishing in the sickbed of non-compliance.

We filed a petition in court based on the violation of the EIA Law. The project lacked an Environmental Impact Assessment study and the corresponding ECC issued by the Government. This was the first time the requirement was sought in a court of law. The government lawyers and the judge weren't familiar with this piece of one-man legislation.

A restraining order was issued. After backroom negotiations with government officials and our side, the reclamation project was quietly shelved.

This short stretch of sea can be seen along Roxas Boulevard behind the United States Embassy and the Cultural Center of *Perlas*. Each time I pass that road, I remember the feisty lady leader and her friends who dared to stand up to developers to stop an infrastructure monster even against overwhelming odds.

I also bless the judge who issued the restraining order. It was a good wake-up call for all. The environment department of *Perlas* has since been proactive in requiring an Environmental Impact Statement.

The battle for Manila Bay is not yet over. Many 'developers' covet the sea as a source of great profit from land reclamation. Except for that 1.5 kilometer stretch where one can view the open sea from the boulevard, the rest of the coast has been pretty much 'reclaimed.'

That's a funny word. To reclaim means to 'claim again.' It means the area was owned by someone, was lost , so needs to be recovered.

What came first – the sea, which is millions of years old, or humans who appeared 100,000 years ago? How can anyone claim the sea, which will be around long after people are gone?

The better word perhaps is not to 'reclaim' but to 'claim.' This way a project proponent who wants to fill up the sea with rocks and soil is actually claiming the sea as his alone.

Will that be allowed by Government?

There is yet another move to fill up hundreds of hectares of part of Manila Bay. A lady senator opposing it was advised not to directly tangle with the developer. That's messy. Instead she can train her sights on the government agency in charge of reclamation. She only needs to ask the agency a few key questions:

1. Do you know about climate change?
2. Do you know about sea level rise?
3. Do you know about storm surges? Typhoon Haiyan (Yolanda) in 2013 devastated Tacloban city in Central *Perlas* with 5-meter-high waves from storm surges.
4. Why would you still encourage reclamations along the coastlines?

The madness of flyovers as a Band-Aid solution to traffic congestion is still ongoing. In Cebu City which has very narrow roads, there's a plan to build a dozen flyovers.

LESSONS LEARNED

1 Legal action is often necessary to force parties to come to the table and find a political solution.

Illegal fish pens in Laguna Bay

2 Law and legal action have been used mostly for playing a defensive role to stop this or block that. How can the Law be more proactive and enable good environmental conduct?

3 After one generation, despite the clear and present perils of climate change and worsening traffic, we are stuck in a mind-set of shortsightedness, greed and Band-Aid solutions.

4 What can we do? Laugh! Laughter is how the rational mind reacts to pathos.

LAGUNA LAKE

Ecosystem Theory of Governance

Can a large body of water be managed as one resource by each of the local governments surrounding the lake? Or must the lake be managed as a single ecosystem?

One lake in *Perlas* is so large it is bigger than the entire Metro Manila, bigger even than Singapore. Its waters are fed by both saltwater and freshwater, making it unique. The lake is connected by the 27-kilometer Pasig River to

the sea with its outlet in Manila Bay.

Because of its size, the lake was the target of many local governments that wanted to issue their own permits for fishing and setting up fish pens. Under the 1990 Local Government Code of *Perlas*, they had the power to do this. The situation threatened to suffocate the entire lake.

Under a previous law creating the Laguna Lake Development Authority (LLDA), the body had special powers to manage the entire lake waters. Who was really in charge?

The question reached the Supreme Court. I had the privilege of cooperating with LLDA counsels to develop the theory of the case. We introduced the ecosystem approach of governance over a natural resource. I was out of the country when the case was heard in oral argument. But it was heartwarming to see the theory find its way into Philippine jurisprudence.

> *"Laguna Lake and (its watershed) constitute one integrated, delicate natural ecosystem that needs to be protected with a uniform set of policies. This is an exhaustible natural resource – a very limited one – which requires judicious management … to preserve its ecological integrity and balance.*
>
> *"Laguna Lake cannot be subjected to a fragmented concept of management policies where lakeshore local government units exercise exclusive dominion over specific portions of the lake water. The garbage thrown or sewage discharged into the lake, (taking) water there from or construction of a fish pen … affect not only that specific portion but the entire 900 square kilometers of lake water.*
>
> *"Managing lake resources would mean implementation of a national policy geared toward the protection, conservation and balanced growth and sustainable development of the region with due regard to the inter-generational use …"*

The High Court ruled that:
The court decision recognized the authority of the LLDA to remove fish pens in Laguna Lake.[8] But did the organization have the political will to carry it out? Mother Nature intervened. Shortly after the case was decided, a powerful typhoon swept Laguna Lake and demolished the fish pens.

With reclamation efforts in Laguna Bay, will these birds still come to feed?

Postscript

To this day, illegal fish pens continue polluting Laguna Lake. They are owned by powerful and politically connected persons. About 50 years ago, the average depth of this beautiful lake was about 21 feet. Today, silt and garbage have reduced it to about seven feet. As a result, flooding regularly happens in lakeshore towns and cities.

Some local officials tried to invite developers to dredge and reclaim the shores of Laguna Lake. The plan was to fill up the western part of the lake and allow the developer to sell the land in consideration for dredging part of the lakebed. It would have cost billions of pesos. The project would have also resulted in massive flooding on the unfilled eastern side and other

portions. Fortunately, the bidding failed because there were no takers for the project.

Every crisis presents a wonderful opportunity. The Government could buy and operate its own dredging machines. The lakebed could be dredged and the excavated material used to elevate the length of the lakeshore and be turned into open spaces. These spaces could also be planted with bamboo and trees, transformed into parks and serve as dikes/ levees to protect communities from the incessant flooding that occurs every rainy season.

Bamboo not only has multiple uses for housing, construction (ply-boo or bamboo plywood), furniture, paper, etc., it is also an effective carbon capture mechanism. One hectare of forest trees absorbs 15 tons of carbon dioxide, while a bamboo grove of that size captures 62 tons. Bamboo, the tallest grass, also releases 35 percent more oxygen than trees and controls soil erosion.

Transformed into a recreational area, Laguna Lake could be a great source of human well-being, food and other economic opportunities.

LESSONS LEARNED

1 The solution to the world's problems sits right under our noses. We just have to open eyes that are blinded by power and money.

2 Again, Law and legal action played defense. How can the Law be used to bring about true development for human well-being?

Bamboo, the tallest grass, captures carbon dioxide more effectively and releases more oxygen than a forest of trees.

BANGUS FRY VERSUS A POWER BARGE

The beach in the province of Mindoro is not only beautiful, it is also the breeding and nursery grounds of milkfish (*bangus*).

Why would anyone want to put up a diesel-fueled power barge here?

In the late 1990s, I had the chance to represent a group of bangus fry fisherfolk in their fight to stop the setting up of a power barge in its coastline.

Puerto Galera, the resort town where the power barge was to be put up, was then suffering massive power outages. I knew the case lacked political support because consumers were crying for electricity. The local economy was crumbling because of unreliable power

service. The barge was supposed to be a stopgap measure. The governor of the province was solidly behind it. Everyone was.

We filed the petition in the trial court to stop the project anyway. We lost the case from start to finish.[9]

I still laugh about the experience. What made it fun was the opportunity to introduce in court the theory of 'inter-species responsibility' and argue that since human beings are supposedly more intelligent than lesser life-forms, it is our duty to take care of the fish fry. As their guardians, we could take legal action in their behalf.

We lost the case all the way from the trial court to the Supreme Court.

But we won the respect of the Mindoro governor. After six months, he called me to ask for help and to represent him against a proposed mining project in a protected mountain.

And we won the bigger war. The power barge that was temporarily placed in the area was equipped with state-of-the-art environmental safeguards.

LESSONS LEARNED

1 Law is a function of politics.

2 Losing a battle does not mean losing the war.

3 Law and legal action again played defense. How can it be more proactive?

BEACH PROTECTION

Somewhere in the central region of *Perlas* is a group of islands so beautiful it defies easy description.

In the early 1990s, when electricity came to the Bantayan Island, foreigners settled there and started to buy up land to build tourist resorts. Eager for more revenue and foreign investments, the local government welcomed them with arms wide open.

The foreigners did not stop at building resorts. They started to encroach and build on the coastline in front of lots that they supposedly bought. They fenced off the shoreline for their exclusive use, preventing fishermen and people from docking there or even from passing through.

The practice was outright illegal under the country's Water Code.[10] But then again, in *Perlas*, laws are often taken as mere suggestions.

For many years, I talked to the local government, the foreigners and resort owners about the structures encroaching the seashore and into the sea. No one listened. Many simply scoffed at me.

It was again time to tell a story in a court of law.

Instead of suing the resorts, I decided to target the Department of Environment and Natural Resources (DENR) as the agency in charge of implementing the law. The environment office was sympathetic and knew it had the power to remove these structures. But its officials were afraid of being sued left and right for civil damages and even for administrative and criminal liability. But if I would sue the DENR, and the court ordered the removal of the seawalls and other structures, the agency would have no choice but to comply with the Court's order.

And so it happened.

The court issued a demolition order. With a sledge hammer and a drill, DENR representatives took down concrete fences and kiosks extending to the beach in full view of news photographers.[11]

After the operation, a friend was on his way

to the sea at 3 a.m. to go fishing. He later reported that two men on a motorcycle were looking for me. The men asked if I was at home in Bantayan. Suspecting ill-motives, my friend said I was out of the country.

My police contacts told me similar feedback about two motorcycle-riding men asking where I lived in the city. Two men riding a motorbike

CEBU DAILY NEWS

Keys pregnant and engaged

BEACH ZONE LIBERATED

DENR demolishes resort kiosks in Bantayan

Cebu City signs 'amended' water deal for SRP

in tandem is a common modus operandi of local assassins.

Early the next day, I quickly packed up and left Bantayan Island. My policeman friend, armed with an Armalite and rocket launcher, met me at the port and escorted me to the city. There I took refuge in the house of a friend, and left for Manila the next day.

Despite the scary scrapes, I am still alive and causing mischief. As the Spanish say, *mala yerba nunca muere* (Bad grass is not easy to kill).

Yes, I live an exciting life.

Postscript

While the encroaching structures were removed in 2010, at great cost to the government, the resort owners got away scot-free. They were not sued for damages or criminal violation of the Water Code.

Some resort owners complied with the court order, while others are starting to creep back on the beach again with the implicit consent or negligence of government officials. After

typhoon Haiyan in 2013, newspaper photos showed the rise of new structures built on the shoreline. Some local youths wrote to town officials to ask if these structures have building permits. The story is still unfolding.

I can only do so much. I can start a fire, but I cannot stoke the flames forever. When the time is ripe, maybe the young people who have started acts of enlightened citizenship will one day become political leaders of the town. They will, hopefully, know what is the right thing to do.

Or maybe one day, Nature will come to the rescue with a bigger storm surge and wash out all the illegal structures. Good riddance!

LESSONS LEARNED

1 Government officials really want to do the right thing. They just need the support of citizens.

2 Greed knows no bounds. It is the function of the Law to temper this greed.

3 Legal action can be done by one man determined to do what is right. It comes at great cost of time, money, effort and sometimes of life. But the torch must pass to the young. They will inherit the mess we are leaving behind.

IMUS RIVER

In 1989, I relocated my family to the town of Imus in Cavite province where we put up a chicken farm.

The Imus River which crosses the town was polluted. Together with public officials and leading residents of four towns along the water, we started a campaign to clean up the river. We even had a small boat to patrol the river and keep an eye out for waste dumping.

This was my first try at cleaning up a river.

In less than one year, with the help of a committed town mayor, we were able to considerably clean up the Imus side of the river. The river runs through four towns, including Dasmariñas, Bacoor and Kawit. I was so happy to learn that fish and

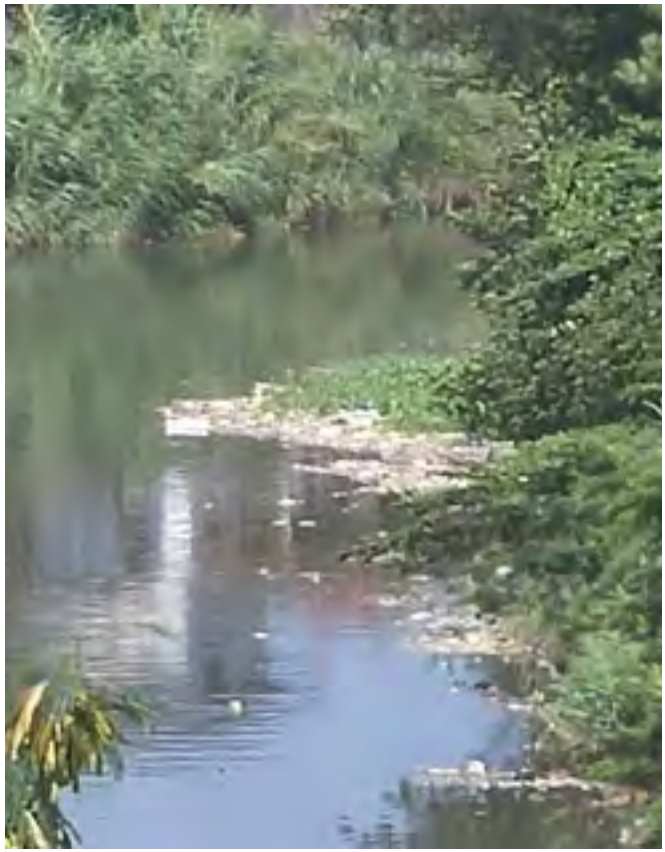
shrimp-like creatures were being seen again. This was proof of how quickly the water quality can be improved with minimal human help.

Then the rainy season came. All the garbage from upstream Dasmariñas town – a relocation site of urban poor settlers of Metro Manila – flowed down in torrents to Imus River and out to Manila Bay.

We appealed in vain to the local governments. Soon after, it was election time and the mayors were too busy to pay attention to non-voting rivers.

This frustrating experience made me realize it was not enough to rely on governments to take on multi-year projects to address environment concerns. Political leaders come and go too fast and too soon. Mayors serve for three years a term or about 1,000 days. There must be a way of sustaining political will to do what is necessary.

If we cannot rely on local or national government to clean up a waterway, what can we do? Where political will is lacking, can legal will be an answer?



After heavy rains, trash is back in parts of Imus River.

This question became one of the seeds that later sprouted and guided us in the Manila Bay case.

ACTION FOR FOREST PROTECTION

In the early 1990s, I focused my work on the campaign against rampant illegal logging.

This was my first hard-knocks adventure in law enforcement. I had the chance to design and help carry out a World Bank project with the DENR that had sufficient resources to do what needed to be done.

A true-blue environment advocate and world-renowned marine biologist, Angel Alcala, was appointed Environment Secretary. He had just received the Asian equivalent of the Nobel Peace Prize – the Ramon Magsaysay Award. I knew him as a man of integrity and competence. When Alcala asked me to join him in government, I respectfully declined and offered to work with him in my private capacity.

This was my introduction to international consultancy. I was engaged mainly to conduct trainings. I partnered with friends and my former law professor Myrna Feliciano, then director of the Institute of Judicial Administration of the University of the Philippines. Together we conducted training sessions for the police, prosecutors, judges and government staff in all hotspot regions where illegal logging went on or had a market for lumber.

That was just the takeoff point. The enforcement phase was called Oplan (Operation Plan) Jericho and involved several agencies.

With the support of Secretary Alcala, we were able to:

1. Organize a lean-and-mean strike force of men of integrity, determination and competence from the Department of Justice, the National Bureau of Investigation, the national police and the DENR.

2. Stage raids against illegal lumber mills.

   The task force went after illegal loggers in Region 2 (Isabela and Cagayan provinces), Region 4 (Quezon Province and Palawan), Region 10 and 11 in Mindanao (Agusan/Davao/Sarangani).

3. Guide the first and most extensive enforcement raids against illegal logging hotspots.

4. Use a then-untested method in natural resources law enforcement of putting people in jail immediately upon arrest using the summary but perfectly legal inquest proceedings.

5. Arrest and prosecute bigtime illegal logging operators, including mayors and Army officials. A total of 360 cases were filed with 285 convictions, according to the NBI tally.[12]

6. Form the first specialized courts to handle illegal logging violations in 1994 with the support of the Chief Justice, the Deputy Court Administrator and my dear professor. The 92 courts were the forerunners of today's Environment Courts in *Perlas*.[13]

7. Conduct air, land and sea enforcement operations using helicopters, boats and land assets of the armed forces. In his book *Taking Back Eden: Eight Environmental Cases that Changed the World*, Oliver Houck describes one of the action-packed operations. It was so effective that upon arraignment, the accused simply pleaded guilty.

8. Learn how to speed up the flow of illegal logging cases. In less than 1,000 days, the conviction rate of illegal logging cases soared from zero to 185. Not bad.

Many cases are dismissed or shelved in the archive because there is no clear 'victim' in environment offenses. Witnesses also disappear. They are bought off or simply do not care to attend hearings because of lack of transportation and other logistical support.

To address this, I proposed a small top-level team to monitor the cases. The team had representatives from the Supreme Court, the DENR and the Department of Justice. We went to the area where cases were delayed, examined each one, asked agencies to explain the status and took action. The logjams had several causes – no transportation for witnesses, a judge sitting on a case, lack of a transcript of court proceedings, etc. One case collapsed after the witness, a dedicated government forester, was murdered in front of his house.

We had to outmaneuver illegal loggers who would use the law to recover trucks that were seized by authorities for transporting illegal forest products.

Vehicle owners filed cases against govern-

Campo 7 forest in south Cebu

ment personnel through an action of replevin, a civil remedy for recovering personal property in the illegal custody of another. The case usually included a claim for money damages that ran to the hundreds of thousands of pesos. The tactic demoralized forestry and law enforcers who were left to face the damage suits with meager resources and without legal support from the government.

Some judges, sometimes for a hundred thousand reasons, would issue the order of replevin directing the Government to return the trucks even though they were the object of valid confiscation by the Government.

Working with the Government's counsel, we helped put together legal arguments that clarified and eventually settled the rule.

It was simple. If the truck or boat carrying contraband forest products is seized by law enforcers, the action is presumed to be regular in the course of official functions. As such, the thing cannot be the object of a replevin action and is beyond the reach of courts (Paat vs. Court of Appeals).[14] In 2010, this rule was institutionalized by the Rules of Court for Environmental Cases.[15]

From Frustration to Vacation

I was so burned out from battles with illegal logging that I decided to take a yearlong break in 1996. Instead of a holiday, I went to school near the Charles River in Boston, USA.

The school that offered a Master of Laws must have committed a serious typographical error because it accepted an academic bum like me.

There, for the first time, and away from the pressure of work, I was able to spend a lot of time with my family, who traveled with me.

While attending academic classes in Environmental Law, I also took classes in sailing. Seeing my classmates so focused on schoolwork and their grades, I organized fun parties. Everyone was asked to dress up in their national costume and bring a national dish for potluck dinner. Those who could perform did so on the piano, guitar, flute or just sing. I hear that they have since institutionalized the International Dinner Party.

My classmates must have had so much fun that they chose me to be the Graduate Students' commencement speaker at the graduation of the Harvard Law School on June 5, 1997.

On the same day, in another part of the world, I was given (so unexpectedly) the highest United Nations Award for the Environment and was listed in the UNEP Global Roll of Honor.

Some Productive Moments

While I didn't worry a lot about grades, my time in Harvard was productive. I finished the required academic papers in a few weeks (instead of months) because I wanted to go sailing in the Boston Harbor and spend time with my family.

One paper I wrote *Charting the Course for Citizens Suits* included a section on harassment suits. My professor was concerned that I tackled two major topics.

Both topics were personal to me. The year before I left for Boston, I was facing a libel case. My pro bono client, an old lady, had complained against a man who dumped used oil, a toxic waste, into the sewer beside her house. To get back at her and at me, the man sued us both for the crime of libel. It was a stressful time. The libel case was dismissed shortly before I left for the U.S. So dealing with a harassment suit was was very real to me.

Instead of writing an academic mumbo-jumbo paper, I went the extra mile and finished the paper in two-and-a-half weeks. In the annex were two draft provisions of how a citizen suit and an anti-SLAPP (Strategic Lawsuit Against Public Participation) action could look like in my home country, *Perlas*.

One year after I returned home, Congress was deliberating on the Clean Air Act. When I was asked for input, I sent the annex. This found its way word for word into sections of the new law.

These provisions were carried over to the Solid Waste Management Act, and are now part of the Rules of Court for Environmental Cases. These rules empower ordinary citizens to initiate legal actions to enforce Environmental Laws, and shield them and government officers from harassment suits.

Another paper submitted as schoolwork became the seed of what is now a plan to initiate a global legal action to address the climate crisis – Climate Justice for Future Generations.

HARVARD
LAW SCHOOL

SOLID WASTE MANAGEMENT ENFORCEMENT

In July 10, 2000, an avalanche of garbage in the main dumpsite of Metro Manila buried more than 230 people under tons of trash. This tragedy hastened the passage of the Solid Waste Management Law in *Perlas*.

It is a wise and effective law. However, as is often the case in *Perlas*, laws are only suggestions.

I was convinced by a friend to head the environment committee of a national group of lawyers. I do not like the word 'committee.' It has been loosely defined as 'a group of the unwilling, picked from the unfit, to do the unnecessary.'

I renamed it the National Environmental Action Team (NEAT) and made the Solid Waste Management Law the focus of action. About that time, a schoolmate in the college of law was appointed to the Office of the Ombudsman. We then formed an Environmental Team of the Ombudsman, a first of its kind. I was excited. I arranged for the team to be trained in our Bantayan Island Sea Camp.

We were off and running. Together with some action-oriented lawyers, we went to work. With the help of environment officials, we sent notices to sue to the mayors. The aim was not to send people to jail but to send a message to officials in Metro Cebu: How can mayors talk of billion-peso projects without handling a basic service like proper garbage management?

Just when it was starting to gain speed, top officials of the government and the lawyers organization were changed, not necessarily for the better. Talk about continuity.

LESSONS LEARNED

1 Never rely on Government and big organizations for sustained action and continuity.

2 There are three R's in solid waste management – Reduce, Reuse and Recycle. We need to add one more R. Remove the word 'waste' from our mental and working vocabulary. To

paraphrase Mahatma Gandhi, 'there is enough for everyone to use, but never enough for anyone to waste.'

3 The seed that you plant today may die. One day, it may just spring back to life.

RAIN GARDENS

Why is there flooding? After a heavy rain, excess water has nowhere to go.

Lakes, ponds and wetlands are supposed to fill this need but clever humans, in need or in greed, cover up the waterways, build houses and structures on riverbanks. And then people complain of flooding.

Republic Act 6716 actually requires the Department of Public Works and Highways (DPWH) to put up rainwater collectors but this law passed in 1989 was never carried out. Can we use legal action to compel compliance?

So we told another story. A legal action for mandamus was filed in the Supreme Court as a test case. New rules of court for environmental cases had just been passed by the High Court in April 2010. I filed the case one week before the Rules were passed.

It ended quickly with the signing of an agreement by Public Works Secretary Rogelio Singson and Interior Secretary Jesse Robredo to implement the law. This included an action plan with a timeline.

Over time, I realized there was a better term for rainwater collector. The phrase is too long, has too many syllables and is not quickly understood. Calling it 'rain garden' sounds more fun!

BANTAYAN ISLAND SEA CAMP

After making a long sea trip in 2001 for an underwater survey of the Visayan Marine Triangle, I shifted focus. With two old sea dogs – Captain Rudy and Commodore Dodong – we decided to spend time teaching young people in Bantayan Island how to care for the environment.

This gave birth to the Bantayan Island Sea Camp in Nov. 30, 2002. Earlier that year, we cleared the beachfront, resulting in a spectacular view of the blue-green water.

With other friends, we would camp out on weekends in a white two-story wooden cottage. We gave lessons about coral reefs, how to plant vegetables and recycle garbage. We took kids out to sea for snorkeling. For many, it was their first time to view the underwater world that way.

It was a lot of fun. It cost less than a hundred dollars (about 4,000 pesos) to put together the time and talent of volunteers – a doctor, scuba diving instructor, architect, mariner, lawyers and some teachers. It was magic for the children.

Sea Camp lessons were interrupted by hard-core law enforcement in raids and arrests by the Visayas Sea Squadron.

After my partner Jojo de la Victoria was murdered in 2006, and my life was under threat, a dear friend and mentor, Nick Robinson, sent me some funds to protect my family and to pursue the rule of law. I used it instead as a seed fund to put up the School of the SEA in my beach place in Sta. Fe town in Bantayan island. This also became a memorial for Jojo, who had paid the highest price for our advocacy. The seafront was designated a marine sanctuary in his name. I wanted to firmly set up the education program for youths, an effort that we, among them Jojo, started with the idea of the first Sea Camp.

The vision was finally born. It would be a school for young people to learn to become Sea and Earth Advocates (SEA).

The School of the SEA was launched in May 2007. Top-caliber people from different fields of studies and passions were there – environment education, marine science, economics, community organizing, ecotourism, law and medicine. It was a happy and

most hopeful occasion.

'Man proposes and Nature disposes.' The school's main house was made of native materials – bamboo frames and a thatched roof of palm leaves. It looked beautiful.

But the climate had other ideas in mind. In June 2008, barely one year after we inaugurated the School of the SEA a powerful typhoon struck Bantayan. Not a single structure with thatched roofs was left standing in the whole island. All poultry farms that housed thousands of chickens were destroyed.

A few years later, with the help of another friend, we built a concrete structure that would be eco-friendly, climate-resilient and typhoon-resistant. We called it the Climate Change House.

In 2013, when Supertyphoon Haiyan (local name Yolanda) swept through Bantayan with more than 300-kilometer-per-hour winds, the concrete house on stilts was the only one left standing and virtually undamaged in the seaside compound.

With eight of the school's 10 structures

destroyed, we renamed the place SEA CAMP, this time with a fuller meaning: Sea and Earth Advocates of Culture, Music and Arts for the Planet.

I promised that from the ruins will rise something stronger and better than ever. The SEA CAMP now has an Art Center for the Earth which we inaugurated on April 22, 2016.

VISAYAN SEA SQUADRON

In 2003 to 2004, while holding weekend training camps for children in the Sea Camp of Bantayan, we noticed that rampant illegal fishing was going on. Dynamite fishing and commercial fishing intrusions into prohibited coastal zones went on unchecked.

Something had to be done. Thus was born the Visayan Sea Squadron. I organized the strike team with crack enforcers from the National Bureau of Investigation (NBI), Navy, fishermen, sea watch volunteers, lawyers, law students and even a few foreigners.

The target was not small fishermen but crime syndicates and operators behind the sale of blasting caps and dynamite powder. Seizures and raids followed.

Operations must have been so effective that word went out that Jojo de la Victoria, the fearless Bantay Dagat (Sea Watch) chief of Cebu City, and I were targets of assassination. We both laughed off the threat.

A local daily reported an interview with Jojo who revealed an intelligence report that angry

illegal fishing operators had put up a one-million-peso bounty for him and me. Barely 48 hours later, a hired gunman shot Jojo just outside his house in Cebu City in the afternoon of April 12, 2006.

Jojo's life was not in vain. Immediately after his funeral, the core team met for dinner to regroup. The tide of illegal fishing started to turn. Exploits of the Visayan Sea Squadron – and the courage and synergy of the men and women who made it happen – will one day be written in detail.

Four years after Jojo died, the stars began to align.

The co-founder of the Visayan Sea Squadron, Alfredo Marañon, was elected governor of Negros Occidental, one of the surrounding provinces. He gathered the other three governors in the region to begin a restorative plan for the Visayan Sea, an area of more than one million hectares. The governors passed a landmark joint resolution to work for the declaration of the entire Visayan Sea as a marine reserve.

The Nation

THE PHILIPPINE STAR

Cebu City Bantay Dagat chief slain

'De La Victoria earlier told reporters that he received information that there was a one-million-peso reward for the person who could assassinate him and Oposa.'

With the May 2016 elections in *Perlas* over, efforts will step up to request Congress and the President to protect this wealthy fishing ground as a national marine reserve and keep it off-limits to commercial operators. It is a crown jewel of the natural treasures of *Perlas* as well as a common heritage of humankind.

If this happens, it would be the largest marine reserve in the archipelago.

8
EX-CON ARSONIST

Using the Law as my fire extinguisher, I fought many forest fires. I battled illegal logging, illegal fishing, illegal projects and government neglect. Instead of being put out, the fire just got fiercer and bigger.

LESSONS LEARNED

1 **Play**
Life and living is not a battle.
Nor is it a fight to protect the Earth.
It is all a game!

2 **Seeds**
We are only planting seeds.

3 We have been engaged in the **Economics of Arson**.

A Game

I have been stuck in battles and working too hard. Enough of fighting and enough of work. Let us look at all this as play. Treating it as a battle to protect the LAW of Life only causes unnecessary stress, anxiety, tension and unhappiness. This attitude of fighting is unhealthy and does not bring forth human creativity.

In battle mode, we forget what life is all about. This is what the Western model of success wants of us – to work, work, work. If we work too hard, we end up stressed, angry and anxious about

the end-result. In the process, we become too focused, obsessed and in a hurry to reach … our common end.

But if we treat it as play, we can think like an artist and begin to have fun. Life is not a zero-sum game, where for one to win, the other must lose. No, if our species must survive and thrive, we must all win.

Seeds

We are planting seeds of ideas, inspiration and action. Often the seeds fall on rocks and hard soil, and will not see the light of day. Some seeds fall on good soil and sprout to life. We nurture them till they begin to grow. Then a wind comes along and blows it away. Or worse, when the seed has grown and borne fruits, a man with an axe comes along, picks all the fruits for himself, and then chops down the tree.

But that is not the end of the story. Some seeds become mighty trees that give shade, oxygen and fruits, sweet and many for all to eat. While no one is watching, bats and birds come along, eat the fruits and drop the seeds in other lands, there to grow and become another tree.

We may not see the fruits
of our planted seeds in a lifetime.
But always, let us savor the moments
when our hands and hearts touch
the Land, the Air and the Waters.
And then by the wave of the wand
of the Great Magician,
mere mortals that we are
become fellow givers of Life on Earth.

So let us go on
with a heart full of joy
in the spirit of caring and giving,
and having fun along the way.

Let us go ahead planting
seeds of hope.

DOUBLE WORK

I realized that while we were fighting fires with water, an Ex-Con Arsonist was also pouring gasoline. No wonder the flames only got bigger.

Ex-con refers to the way we have been treating the Earth – 'Ex'-traction and 'Con'-sumption.

This is today's economic model. We take out as much as we can from the Earth, use it briefly and then throw it away. We are the only species of animal that does that.

Practitioners of extraction and consumption economics – the Ex-Con Economists -– call this 'progress and development.'

They poison the Water that we drink,
the Air that we breathe,
and the Land from where we get our food.
They look at the forests –
trees that took hundreds of years
to become what they are,
and want to mow them down
to increase the numbers in a ledger.
And call it 'progress and development.'

They see the fish in the sea,
and want to take as much and as fast as
they can.

In their wake, the sea, once teeming with life,
is left bare and barren.

They find shiny rocks
hidden in the bowels of the Earth.
But life-giving soil and water get in the way,
So they throw it all away in a single day.
Water becomes 'waste water,'
all for a few pieces of silver.

The things taken from the Earth
are used for a very short while,
then thrown away,
all in the name of style.

This is called 'progress and development.'

Amused by their game of numbers, they sit back to behold with great delight the burning of the Earth. They are happy to see the numbers grow and crow about the growth of GDP.

Remember the true meaning of GDP? Great Disaster for the Planet.

As we have seen, this kind of ex-con economics has resulted in the destruction, devastation and poisoning of the very Life Sources and Life-Forms on Earth, including that pesky animal species to which Ex-Con Economists belong.

By the way, 'ex-con' also means 'ex-convict.' Based on evidence of global destruction by the ex-con economists, they hereby stand charged, tried and convicted of the crime of … Planetary Plunder.

LAW AND LAWYERS

The oldest profession in the world is practised by lawyers.

The Law and lawyers have been enablers of the capital crime of plunder. We have been accomplices in rape, and pimps in the prostitution of our own Mother Earth. This enslavement of the Earth in the later part of the 20th century gave birth to the field of Environmental Law.

Over the last four decades, we sometimes succeeded in stopping destruction, blocking harmful projects, and on rare occasions, punishing the offenders. Lamenting how little has been achieved, Justice Antonio Benjamin, world-renowned environmental jurist of the Supreme Court of Brazil, said, "Perhaps, without Environmental Law, it could have been much worse."

But then, is that all we can do?

In the previous section, I shared with you my adventures (and misadventures) in Environmental Law. I worked hard and paid a high price for the battles that I fought – stress, tension, anxiety, sleepless nights, loss of revenue, murdered comrades, assassination attempts and death threats, harassment cases, and time away from family and friends.

Today, I sit back to compare the input of work vis-a-vis the results, and cannot help but be humbled by how little I have accomplished.

This overwhelming hindsight made me see that:

1. This is all a game.
2. In our lifetime, we can only try to plant seeds of hope.
3. Environmental Law must stop being just a policeman of bad behavior.

Can the Law instead be a promoter and an enabler for the evolution of caring and nurturing human beings?

That could be the game of Legal Marketing, the art of selling the 'good' that the Law seeks to fulfill.

Ordinary marketing sells a product or service. The Law can sell a model of conduct.

9
CLIMATE IN CRISIS

'In the Laws of Nature, there is no right or wrong, there are no rewards or punishments. There are only consequences.'

- Francis Bacon

When we violate the laws of man, we can get away with paying a fine or going to jail, or simply walk away after paying a bribe. But when we violate the Laws of Nature, there will be consequences. Many of these we do not see or feel right away. Unlike the hot taste from the bite of a chili, the impact of violating the Laws of Nature often takes years, sometimes even generations before we begin to feel the heat.

Here's one of the Laws of Nature:

Matter cannot be destroyed; we can only change its form.

When we light a matchstick, out comes fire and smoke. A few seconds after, the fire and smoke are gone, and all that's left is a charred piece of wood.

And so it happened to the Earth. In the last 200 years, we burned wood, coal, oil and gas – fossil fuels of different forms – to make fire. By our burning, we released a lot of smoke. We thought that by some magic, all that smoke would simply vanish into thin air. After all, out of sight is out of mind. Right?

Wrong. Matter cannot be destroyed. When we burned coal and oil, we only changed its form from one state (solid and liquid) to another – gas.

All that massive burning happened in the last 200 years, a blink of the eye for Mother Nature and Father Time.

But the smoke did not disappear. It got stored in the upper layers of the Air. It became like a roof over the Earth that kept the heat inside our atmosphere, instead of escaping into outer space.

The Human Body

Think of the human body. What happens when body heat cannot be released? We develop a fever.

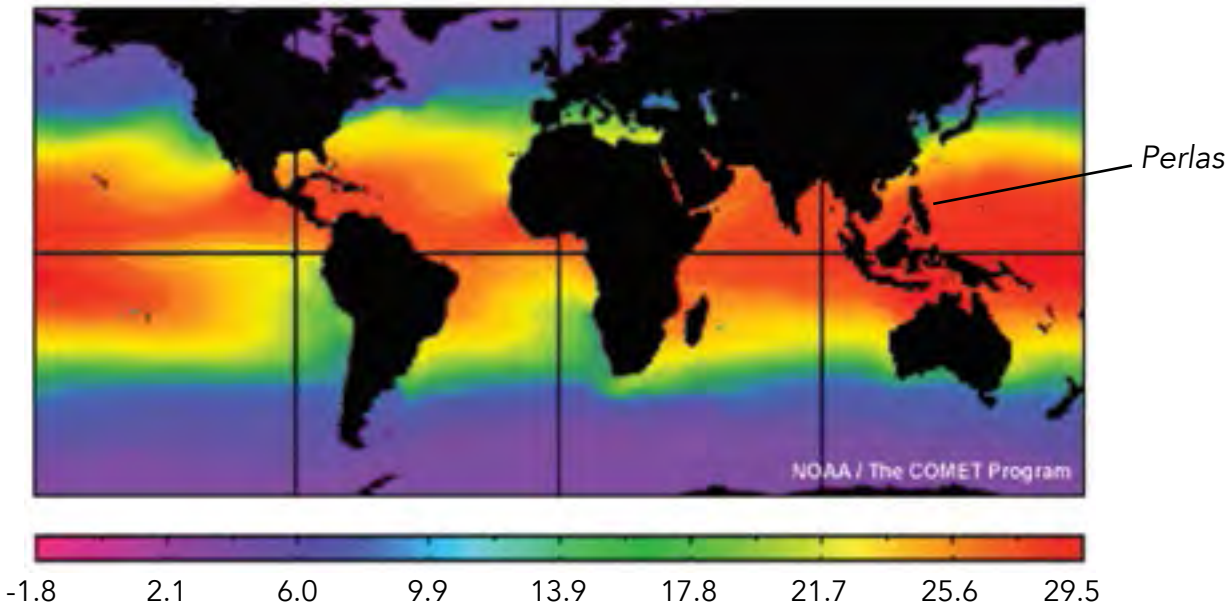
But instead of a temporary fever, the temperature of the Earth is permanently heating up. Look again at the human body. The average body temperature is 37 degrees Celsius. What happens if it suddenly rises to 38 degrees? The person has a fever. The immune system and the anti-bodies will try to fight the fever to bring it down.

If the fever stays up, or worse, continues to rise, the anti-bodies cannot cope with the invasion. In time, the human organism will lose out and expire.

This is what is happening to the Earth – it has a fever and the fever is rising. In the last 100 years, the Earth's temperature rose by 1 degree Centigrade, permanently. Despite this seemingly small number, we are seeing more and more climate-related organ malfunctions – flooding, typhoons, rising sea levels, etc. The adaptive mechanisms of the Earth, its anti-bodies, are trying to fight back but they are overwhelmed.

What worries scientists is that this fever is not going down. It is permanent and, worse, it is rising faster and getting hotter! If we go

on with today's pyromaniacal ways, the temperature can rise by 4 degrees to 6 degrees Celsius. Again, what would happen to the human body if instead of having a normal temperature of 37 degrees, the temperature would rise to 41 or 43 degrees?



Sea Surface Heat Map of the Earth

The hottest temperature is indicated by the color red. Notice which part of the sea is reddest? The western part of the Pacific Ocean, east of *Perlas*, is the hottest. This is where powerful typhoons are formed.

Map Source: National Oceanographic and Atmospheric Administration of the United States

ORGAN MALFUNCTION

The Earth's fever is causing multiple organ malfunction:

1. Heat in the surface of the sea is the fuel of typhoons and hurricanes. So storms have become stronger and stronger and more erratic.

2. The water cycle is going haywire. With hotter water bodies, there is more evaporation that results in greater volume of water vapor in the clouds. What goes up must come down. All that water will fall back to the Earth as torrential rain or snow. Fatal floods and blizzards are happening more often.

3. In some parts of the Earth, the land is getting hotter. Fires break out, and extended dry spells and droughts become more common. Some call it the new normal.

4. The water flowing from melting glaciers in the colder regions of the Earth has to go somewhere. It goes to the sea. This and the heated sea surface expand the volume of the sea and cause the sea level to rise. It is creeping into the coastlines faster than ever seen in human history. Scientists tell us that in the next 100 years, the sea level can be 1 to 3 meters higher than it is now.

Imagine what will happen to the water supply, to the farmlands, and to our homes that are usually at sea level. This is not a prediction of the future. As we speak, it is already happening at a speed we never imagined.

Sea level rise is not scientific abracadabra to me. When I built my house near the beach in 1994 along the seashore of Bantayan island in central *Perlas*, the edge of the sea at high tide was 45 meters away. Today, in 2017, the water is barely 20 meters away. Scientists tell us that this is only two inches of sea level rise.

In the next hundred years, when it rises by one to three meters (120 to 360 inches), what will happen?

5. Seawater is becoming more acidic from carbon dioxide. This is playing nasty tricks under the sea – on marine life, coral reefs and other life-forms. They are all suffering from high fever.

In sum, we are in a state of crisis. Land will be flooded or will become bone-dry. Water will be a major problem – either too much of it or too little. Extreme weather events like typhoons, floods, droughts, and the resulting diseases, famine and wars, will become more common. So, what do we do?

Let us break for a while from this gloomy scenario. Let me tell you a little story.

A SICK MAN

A man had been smoking two packs of cigarettes a day for 20 years. Today he is coughing, sneezing and suffers from a high fever. His wife calls for an ambulance and takes him to the emergency room. He ends up in the intensive care unit.

After one week, he wakes up. When he consults the doctor, he's told the diagnosis: He has severe emphysema and has Stage 3, lung cancer.

So what must he do? Will he run to the nearest store to buy another carton of cigarettes and go on smoking two packs a day?

The obvious answer is simple. He must stop the cause of the disease – smoke. In the study of climate change, that is called 'mitigation' – to reduce the source of the smoke.

What else must our patient do? He must learn to accept his weakened state and do everything in his power to adjust to the changes. In the science of climate change, that is called 'adaptation' – to adjust and adapt to the changes that are happening.

THE CRISIS

Yes, we are in a state of crisis. The sooner we accept that, the sooner we embrace it, the sooner we can turn it to our advantage.

The Chinese write in picture words that tell a story. Their word 'crisis' is made up of two characters – *Wei* and *Ji*.

Wei means 'danger,' *Ji* means 'opportunity.'

If humans are truly wise as we claim to be, we must see the danger, accept its reality, and then do everything in our power to avoid getting killed in the process.

Remember our game with words? Let us stop calling it 'climate change.' That is too mild a name to describe what is happening. The climate changes from hour to hour and from day to day. It does not aptly describe the sense of urgency that we face today.

From now on, let us call it the 'climate crisis.'

We must also see the other side of the word 'crisis' – opportunity. Only then will we better survive and thrive.

But how?

It all begins with a question. Asking that question will begin our journey to the world of opportunity.

10
CPR FOR THE VITAL ORGANS OF LIFE

If extraction and consumption got us into trouble, how can we get out of it?

Remember what Lao Tzu said in the story of the cave walls:

> 'Watch your thoughts,
> they become words.
> Watch your words,
> they become actions...'

To get out of one mind-set, think of the exact opposite.

The opposite of consumption or waste is conservation.

The opposite of plunder and pillage is protection and preservation.

The opposite of removing is restoring.

So, the opposite of the economics of Extraction and Consumption (Ex-Con) is Conservation, Protection and Restoration (CPR).

CPR also refers to the emergency medical procedure applied to the heart and lungs of a human body that is about to expire: Cardio-Pulmonary Resuscitation. With the same urgency, we need to rescue the vital organs of the Earth – Land, Air and Waters.

With the great damage already done to these resources, there is so much to do. As Winston Churchill once said, "We are faced with insurmountable opportunities."

This new kind of economics is called many names – Sustainable Development, Climate Capitalism, New Economics, Nature Capitalism, Ecological Economics, etc.

They are all very good and intelligent words. They capture the essence of what we must do.

But many of us are not native English speakers and need translation before understanding these terms. Also, foreign words that need long (and often complex) explanations do not easily resonate with my heart.

The Cebu Flowerpecker is found only in the island of Cebu. This elusive species has never been photographed, only illustrated.

I like to use the phrase 'CPR Economics' because the word itself – CPR – describes what we must do.

RESTORATION ECONOMICS

We can also call the new model Restoration Economics because it seeks to restore the:

1. Life-giving forces of the Land, Air and Waters
2. Lost connection between man and nature
3. Torn fabric of human society
4. Common sense goal of life – the experience of happiness

1. Restoring the LAW of Life

With all the damage already done to the Land, Air and Waters, there is so much to do and so little time. The window of opportunity is fast closing.

But human beings are very intelligent animals. If we decide to do something, we have the will and find the resources to do it. In the early 1960s, a world leader promised to put a man on the moon before the end of the decade. In 1969, Apollo 11 completed its mission; the first man stepped on the moon.

Yes, if we decide to do it, it can be done.

CPR Economics can be a new frontier of industry, economic activities and livelihood.

This would include:

a. Cleaning and reviving the water quality of rivers
b. Revitalizing marine resources e.g. putting up marine sanctuaries
c. Restoring sanity in roads with clean and efficient transportation systems with a focus on non-motorized mobility
d. Relentless energy conservation
e. A total shift to clean and energy-efficient systems
f. Massive mountain revegetation
g. Soil and water conservation in farmlands
h. Water conservation and recycling systems
i. Reducing, reuse and recycling of materials
j. Opening parks and public spaces for leisure and wholesome family activities
k. Sustainable and organic agriculture.

And many more. The sky is not even the limit.

The nature of business must be the business of Nature.

2. Lost Connection Between Man and Nature

The most serious problem of modern man is his alienation from Nature.

In a city ablaze with light
Making day of a dark night,
A shooting star I do not see,
And the world becomes all about me.
I forget that I am but a grain of sand
Of a rich and living land…

In a world paved with concrete, humans are disconnected from the sources of life. In the digital world, trees and animals appear only as images on a screen.

We forget that innate in every human being is the love for life and a yearning for the natural world.

The climate crisis is the most powerful symptom of this Nature-Deficit Disorder (NDD). We have burned down everything, and call this progress. We are only starting to understand that by burning the Earth, we are burning ourselves.

The innate love of humans for Nature is called biophilia. We must once again touch the soil and feel its life-giving force. By doing so we will better understand that our food comes from a nourished land. We must again walk in the company of birds and butterflies. Only then will we feel again in our hearts our true role as caretakers of the Earth.

We must again touch the cloud
As Mother Earth sings clear and loud.
We must again touch the starlight,
And feel magic of unspeakable delight.

3. Reconnecting Humans

In the single-minded pursuit of material things, the game became all about competing for who had the most – the biggest house, the flashiest car, the fattest bank account. This is a symptom of the fraying fabric of society.

But humans are social animals, hardwired to cooperate with one another. That is why the worst punishment for a convict is to isolate him from human contact.

We need to restore the spirit of cooperation and vitality of community life. It is in being with friends, family and neighbors, and in cooperating with one another that we find great joy and collective fulfillment.

I forget that I am but a grain of sand of a rich and living land...

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4. Return to Happiness

A worldwide survey by an Oxford psychologist asked the question: What are the three sources of genuine happiness? The results:

1. Social relations with family and friends
2, Work satisfaction
3. Leisure

Nowhere is money mentioned. Studies show that generally, after people reach a level of income stability and security, they seek the fulfillment of greater, non-material goals.

> *'All animals, except man, know that the principal business of life is to enjoy it.'*
>
> *- Samuel Butler, novelist*

People value the experience of happiness, not its pursuit. Being in the moment – savoring each day, being with family and friends, doing something we really enjoy, relishing the sight of a bird in flight. Is this not what human life is all about?

These visions of happiness may sound Pollyannaish and kumbaya. The challenge – and the fun – is how to structure a system of economics and governance that will promote these values and aspirations.

Life is a lot like music.
It is a series of moments,
Of shifting sound and silence
All leading to a point of rest.

But today lets us laugh,
No, now,
For moments hence our laughter
Will be but the distant sound of
a happy memory.

Let us reaffirm this moment
That life is worth living,
With laughter unbridled by inhibition,
'And then howl at the ceiling,
For the sheer pleasure of living.'

11 STORIES OF CPR ECONOMICS

How do we learn? By example and imitation.

The new economic mindset seeks to conserve, protect and restore (CPR) the sources of life on Earth. We also called it Restoration Economics, a field of study that restores:

1. Land, Air and Waters
2. Our lost connection to Nature
3. Our lost connection to each other
4. The experience of happiness.

To think of this new world, we cannot rely on stock knowledge. Knowledge is stagnant. We must use the power of imagination. As Albert Einstein once said, "Imagination is more powerful than knowledge."

The only thing that obstructs is the mind, our ability to think of a new model and manner of living. To make it easier for the mind to open, let us look at living examples.

The heart constructs,
the mind obstructs.

Never mind
the mind.
It only follows the heart.

If you change the mind,
it can change tomorrow.

If you change the heart,
it is forever.

While there is no perfect society, there are excellent examples of CPR Economics already in play. Inspiration is the most powerful form of leadership. And learning by imitating is easier than reinventing the wheel.

There are countless examples happening around the world. May I reach out to you, dear friends reading this, to be on the lookout for more. Feel free to send them our way to add to this list. Post them at www.oposa.ph.

May they inspire us to create a brave new world of daring and caring.

LAND

Consider land as the living carpet from where we get our food.

Plant growth is an intricate and delicate process. Soil is not merely dirt. One teaspoon of soil contains tiny living beings – 20 million fungi and 5 billion bacteria – that make the soil alive.

With water and sunlight in the process called photosynthesis, plants grow and become our food. They can be eaten directly as fruits and vegetables, or indirectly through the animals we eat.

The topsoil that makes plant life possible is very thin, a few inches at best. Because we do not see the soil move, we take it for granted that it will be there forever. But we have stripped the soil of its skin of green, exposing billions of living bacteria and fungi to sunlight. These tiny living creatures dry up and then die. The land becomes a desert, a process called 'desertification.' Often, the topsoil is washed away by the rains. This is called 'erosion.'

In the ways of modern civilization, chemical poisons have been, and are being, pumped into the soil. Every time we try to kill insects that also feed on plants, we also poison the land. Whenever we use chemical insecticide, only a small portion actually goes to the plants. Much of the poison drips and poisons the soil.

In the new world of CPR Economics, the emphasis will shift from taking to restoring. Instead of trying to take out as much from the soil as possible, emphasis will be placed on making sure that the land retains its capacity to produce food.

If the land already suffers desertification, erosion and contamination, we must strive to restore the soil to its healthy and productive condition.

SOIL AND WATER CONSERVATION

RICE TERRACES OF THE PHILIPPINES

The most spectacular rice terraces in the world are located in the northern highlands of the Philippines.

Built 2,000 years ago, the Ifugao Rice Terraces of the Cordillera mountain range follow the contours of the mountains. If the steps were to be put end to end, the terraces would circle half of the globe.

At the top of the mountains, the forest is preserved and serves as Nature's 'water tank.' Through simple gravity, excess water flows gently downstream. The gently flowing water irrigates the terraces carved out of mud and stone. The terraces prevent the erosion of the topsoil during rains.

UNESCO declared the Ifugao Rice Terraces a World Heritage Site and described it as a 'living cultural landscape' of 'great beauty that expresses the harmony between humankind and the environment.'

The intimate knowledge of Philippine ancestors about the interplay of the life-forces between trees and forests, and soil and water was handed down from generation to generation.

For the marvel of its engineering, the rice terraces made by the Ifugao ethnic group is sometimes called the eighth man-made wonder of the World in the league of the Great Wall of China and the Pyramids of Egypt.

This monument is also special because it was not made by slave labor. It was carved by the hand of small-scale farmers working together as a community.

From this spirit of community and cooperation, the Filipino value of *bayanihan* may have been born. The word comes from two beautiful Filipino words: *bayan* – community and cooperation – and *bayani* – hero. *Bayanihan* means 'cooperative heroism.'

In recent times, the soil and water conservation technique of the Ifugao Rice Terraces became more scientific. It is now known as Sloping Agricultural Land Technology (SALT). This simple technology uses an A-frame to define the contours and slope of the hilly lands.

TURMERIC TURNAROUND
Meghalaya, India

When the government banned coal mining in April 2014, hundreds of rural families in Meghalaya's Jaintia Hills region in northeast India were thrown out of work.

They switched to planting turmeric for their livelihood. Cultivation of the herb, a spice used in curry and many Asian dishes aside from being valued for its medicinal properties, has proven to be a game changer.

The district produces some of the finest turmeric in the world with its *Lakadong* (*curcuma longa)* variety, whose curcurmin-rich content is higher than what is available in the market. Instead of engaging in rat-hole coal mining, which resulted in holes dug up all over the villages, residents now grow a sustainable crop.

Turmeric produces a deep yellow color sought after in the pharmaceutical industry. It is also used in cosmetics, dye-food coloring and beverages.

Researchers continue to be surprised by the wide-ranging health benefits of turmeric as an anti-inflammatory agent, support for detoxification and an anti-oxidant that decreases the risk of cancer.

India is the top world producer of turmeric. The state of Meghalaya produces over 8,000 metric tons a year. Most of it is grown by small and marginal rural farmers in the Jaintia Hills and Garo Hills region because of the favorable climate and soil conditions.

URBAN LIVING

More than half of the world's population now live in urban areas. But almost all cities today are anything but livable. Cities are paved over with concrete, roads are clogged with motor vehicles, the air is foul, the waterways are polluted and people are in a hurry to get to nowhere.

Are humans destined to be urban zombies?

Traffic is the most visible challenge in urban living. Can there be a city without traffic congestion? Yes.

CITY WITH NO TRAFFIC
The Netherlands

Is it possible for a city packed with people enjoying high per capita income to avoid traffic congestion?

Amsterdam is one such city. It has very narrow roads and a lot of people. Early on, understanding the space limitations of their city, the government invested in bike lanes, wide sidewalks and a good tram system.

Dutch Prime Minister Mark Rutte rides to work in The Hague on a bicycle.

Young and old, rich and poor, the powerful and the powerless, rain or shine, summer or winter, people walk or ride bicycles.

No wonder they have enough disposable income; they don't burn their money in gas tanks.

Today the Netherlands boasts of 22,000 miles of cycle paths. In Amsterdam, 38 percent of all trips are made by bicycle. All major Dutch cities have designated 'bicycle civil servants' tasked to maintain and improve the network.

A photo of Dutch Prime Minister Mark Rutte riding a bicycle to his office in The Hague, a familiar sight to locals, went viral when it

appeared side by side with the news photo of a helicopter transporting the president of the United States who arrived for a Nuclear Security Meeting in The Hague in March 2014.

It is all about not wasting precious road space.

REDESIGNING THE CITY FOR PEOPLE

Curitiba, Brazil

Curitiba was like any other city of a 'third world country' – crowded, traffic-congested and peppered with slum areas. Using common sense planning techniques, its transportation system saw the upgrade of its bus system, turned selected streets into pedestrian walkways, and created a car-free central city zone. It also put up bikeways. With these measures,

Elevated platform of a Bus Rapid Transit terminal in Curitiba, Brazil

fuel consumption and air pollution reduced significantly, the lowest in Brazil.

Architect Jaime Lerner, who took office as mayor in 1971, introduced the world's first Bus Rapid Transit (BRT) network.

The city also increased its green areas and recreational facilities, including parks and bicycle paths. Curitiba also created natural drainage systems where river and rainwater flooding is held in the lakes and parks surrounding the lakes.

The cost of building parks and relocating slum dwellers was estimated at five times lower than the cost of building concrete canals. Instead of hiring mowers, the city keeps sheep in the parks to eat grass and provide natural fertilizer.

GREEN ROOFS

Rooftop gardens do more than beautify.

A green roof or living roof of a building is partially or completely covered with vegetation. This design can keep the building cool, catch rainwater, improve air quality and provide tenants an oasis in the middle of an urban jungle.

Green roofs are already popular in Germany and Australia, as well as Canada's city of Toronto.

In France, a law was passed in 2015 mandating that all new buildings that are built in commercial zones must be partially covered in either plants or solar panels.

Green roofs have an isolating effect which helps to reduce the amount of energy needed to heat a building during the winter or cool it in the summer.

Acros building in Fukuoka, Japan

San Francisco became the first U.S. city in 2016 to require that most new buildings be made with green roofs or solar panels or a blend of both. Cordoba became the first city in Argentina to require green roofs in July.

In 2009, Toronto mandated green roofs on all new industrial and residential buildings. Germany's green roof industry has been legislated and supported by the government in various ways since the 1970s.

Some benefits of this eco-friendly design:

1. It adds natural beauty and major aesthetic improvement to buildings. This increases their investment potential.

2. The plants capture airborne pollutants and filter noxious gasses.

3. Green roofs assist with storm water management by absorbing rainwater and act as natural filters for the water that does run off. This eases stress on sewer systems.

4. They open new areas for community gardens, commercial and recreational space in busy cities where space is limited.

RESTORING URBAN VITALITY

CAR-FREE DAYS
Bogotá, Colombia

In February 2000, Bogotá Mayor Enrique Peñalosa organized the city's first car-free day. This action was later approved in a public referendum and became an annual event. In 2014 Bogotá expanded the day to an entire week of no car usage in main routes. In the city of nearly seven million people, roughly 600,000 cars were not used.

The air was cleaner, the streets quieter. More people engaged in physical exercise, people spent less money on gas, and more time was reclaimed due to not having to sit in traffic.

Compare that with its former lifestyle where residents lost roughly 22 days per year sitting in traffic.

Bogotá inspired the practice of regular traffic bans with its weekly Sunday Ciclovia event running since 1974. Each Sunday and public holiday from 7 a.m. until 2 p.m. certain main streets are blocked off for runners, pedestrians and bicyclists.

Mexico City also closes city center streets to cars every Sunday.

Paris, France

In Paris, the first Sunday of the month is a car-free day.

Paris Mayor Anne Hidalgo supported the campaign which started in March in response to increased air pollution in the City of Lights. Traffic is cleared on eight lanes of the world-famous Champs Elysées and surrounding streets, and the city is pushing plans to pedestrianize the busy road along the Seine River.

To mark World Car-Free Day on Sept. 22, 2016 the French capital closed 400 miles of streets or almost half the city center to cars over the weekend.

SMART VILLAGES
Malaysia

High-tech 'smart villages' in Malaysia are creating incomes for rural families while promoting environmental sustainability. Each community has about 100 homes and a sustainable farm system that provides villagers with both food and employment. This system has tripled the average monthly income of residents in the smart villages to about US$475.

Each home is built on 1,000 square feet using mostly post-consumer materials that would normally go to a waste disposal facility. Each home is constructed in just 10 days at a cost of under $20,000. The smart villages are powered by solar, biomass and mini-hydro electricity.

Residents use aquaponics to culture fish. The filtered fish tank wastewater is then used to irrigate vegetables, plants and fruits. The plant pots have a smart valve that automatically detects moisture levels and releases water as necessary. Worms and other insects from the plants are fed to free-range chickens. This system optimizes nutrient absorption, minimizes waste, empowers anyone to farm and enables crops to be grown on previously non-arable land.

NO TO FOOD WASTE

One-third of all the food produced for humans worldwide is lost or wasted. This is enough to feed three billion people or almost half the world's population according to the UN Food and Agriculture Organization (FAO).

Waste comes in many forms. For example, restaurants in the U.S. serve massive portions that is too much to eat. Then whatever is not eaten is dumped as garbage at the end of each day. In other over-consuming societies, people buy many grocery items which are on sale and look cheaper by the bulk. Then they forget about it, or take only little, and the rest is thrown away.

To counter this trend, some restaurants now offer smaller portions. U.S. colleges have removed trays from their cafeterias, thereby reducing the temptation to take out more food on the tray. This subtle shift alone reduced by one-third the amount of food students take and waste in the U.S.

An American family of four throws away about $1,500 worth of food a year. Food waste – with

its carbon footprint and release of methane – is also a main source of hot gases heating up the atmosphere of the Earth.

Vendors want vegetables and fruits to 'look good' in order to fetch a high price. For this reason, farm produce with holes, bruises or discoloration are rejected by supermarkets.

However, these standards do not affect the food's safety or taste, and are based solely on appearance. Perfect-looking fruits and vegetables are laden with chemical insecticides that try to kill off the bugs, bees, and butterflies that visit the farms.

In Lisbon, Portugal, a cooperative called Fruta Feia (Ugly Fruit) takes rejected produce and sells it at a cheaper price. Registered customers receive a weekly food crate of eight pounds of fruits and vegetables for less than $5.

Fruta Feia has tried to change the notion that only perfect-looking farm produce is worth buying.

ENERGY CONSERVATION AND SOFT ENERGY

POWER SAVING
Japan

On March 11, 2011, the Tohoku earthquake triggered a tsunami that hit the Fukushima Daiichi Nuclear Power Plant, which had to be shut down. To cope with decreased energy supply, Japan started a campaign for *setsuden* (power saving).

The campaign helped increase public awareness of energy use and efficiency. Large companies in Japan now run high-profile efficiency programs.

With the cooperation of its citizens, Japan was able to replace half of its missing nuclear power capacity through energy efficiency and conservation measures. In 2013, Japan experienced the fastest investment growth in the world, increasing 80 percent up to almost $29 billion. Japan turned a crisis into an opportunity.

LED TRAFFIC SIGNALS
Chicago, USA

In 2004, Chicago started replacing its traffic signal lights with light-emitting diodes (LED) which use almost 85 percent less energy. The switch resulted in energy savings for the city of $2.55 million a year and $100,000 annually in materials.

Chicago aims to reduce its carbon footprint by 30 percent by 2020. The LED program makes up 15 percent of this target.

LEDs are brighter and emit light more evenly, making them more visible in foggy conditions. The LED traffic lights last for 100,000 hours

compared to 8,000 hours for incandescent bulbs. Fewer burnt-out traffic lights mean less time spent replacing bulbs and more safety in intersections.

FLOATING SOLAR PANELS
Japan

If you have limited space on land, go to the sea.

That is what Japan did by building floating solar islands as an innovative solution in exploring renewable energy. The solar panels are designed to be waterproof. Since solar modules function better when they are cooler, placing them near water actually helps their performance.

Japan has a 70-megawatt (MW) solar island and plans to add two more to form a network of thirty 2-MW stations adding another 60-MWs of solar capacity.

In June 2014, Japan unveiled the first offshore floating wind turbine in Asia. Plans are afoot to develop more commercial offshore wind

projects to produce another 350-MW of power as Japan moves away from reliance on nuclear power.

RENEWABLE ENERGY
Freiburg, Germany

After Freiburg was destroyed in World War II, the city was rebuilt for people rather than for cars. Pedestrian-friendly streets, bike lanes and trams were given more importance.

Almost half of the city remains protected as parks, forest or landscapes. With this standard of land use planning, three out of four of its residents walk, bike or take public transportation. Freiburg has more than 300 miles of bike paths. Seventy percent of the city's population live within half a kilometer from a tram stop.

Freiburg is known as Europe's 'solar city' for installing more solar photovoltaic panels than any other German city. The city also heavily relies on biomass to power residences and businesses. Under its recycling program, discards from kitchens and gardens are collected to make into compost.

In a district of Freiburg called Vauban, there are no cars. People's houses face each other and without parked cars blocking the roads and their views to one another, more friendly interaction happens. In case anyone really needs a car, there is a communal garage nearby one can use a car and just pay a nominal fee for the use.

GREEN-POWERED ISLAND
Eigg, Scotland

The Scottish Island of Eigg is one of the world's first islands to power itself exclusively with renewable energy. Using a mix of hydropower, wind and solar energy, carbon emissions were slashed by a third in a year.

To ensure that all people have enough electricity, islanders cannot use more than five kilowatts at a time and businesses are limited to 10 kilowatts.

Residents enjoy lower energy bills and a better quality of life. Before the introduction of 'Eiggtricity,' as the locals call it, residents

relied on diesel-fired generators that were noisy, polluting and expensive to run. One resident said he used to buy a barrel of diesel a month to get five hours of electricity a day. Now it costs the same resident 30 pounds (about US$48) a month to get 24-hour electricity.

The way of the future is 'soft energy' – clean and renewable energy. But this must be coupled with a sustained energy conservation program. There is enough energy for every man to use, but not enough for one man to waste.

COOLING FROM THE DEEP
Amsterdam, The Netherlands

Cold water from the bottom of Lake Neiuwe Meer feeds a district cooling system which energy companies in Amsterdam have been tapping for free since the early 1990s.

The lake has a depth of 30 meters and temperature of five degrees to six degrees Centigrade.

Lake water is extracted using a closed system of pipes. It is then transported to the urban area where it is used to provide air-conditioning to cool buildings, homes and business establishments.

The system replaces conventional mechanical chillers and cooling towers. It reduces the use of harmful cooling fluids and lowers carbon dioxide emissions by over 70 percent compared to traditional cooling methods.

In 2010, the program grew to 50,000 connections with a total capacity of 120-MW. In places near the sea or a water body, this is a very feasible option.

ELECTRIC CAR SHARING PROGRAM
Malaysia

In the future, if cars are needed at all, they would have to be small and energy efficient.

In August 2014, Malaysia began the first electric vehicle (EV) car sharing program in Southeast Asia. The Cohesive Mobility

Solution (COMOS) started with 40 units placed in hotspots in the Klang Valley.

The program includes EV charging providers, fleet operators, parking management operators and telecommunications network operators. COMOS will run like a typical car rental system with hourly fees only slightly higher than normal taxi charges.

The goal is to field 3,500 cars nationwide by 2020.

URBAN DESIGN TO PROMOTE SOCIAL CONNECTIONS

SUPERBLOCKS
Barcelona, Spain

To address high levels of noise and air noise pollution, Barcelona designed parts of the city into 'superblocks.' Basic roads form a polygon or inner area called *intervía.*

Under this grid system, the interior area

occupied by human dwellings is closed to cars and parking (only residents and service-emergency vehicles can drive through). Public space gives way to pedestrians. Traffic flows around the *intervía* using exterior roads on the periphery.

The mobility plan, which started in 2003, aims

to reduce traffic and free up streets to turn them into 'citizen spaces' with green areas to 'fill our city with life.'

One of the most popular places in Barcelona is Las Ramblas. The boulevard's center island, which takes up most of the space, is reserved for walking. Local roads around Las Ramblas are mostly pedestrianized. Business is brisk for stores along the way because people on foot have more time to shop and stop for food and drinks without worrying where to park.

Las Ramblas is one of the most popular destinations in the city of Barcelona for strolling, shopping and dining. Only a small portion on each side of the pedestrian boulevard is available for vehicles.

RESTORING CONNECTIONS TO NATURE AND TO EACH OTHER

CHEONGGYECHEON
Seoul, South Korea

In the early twentieth century, Seoul was a growing city. The placid waters of Cheonggyecheon River that flow through downtown Seoul looked more like a sewer. The stream was bordered by a slum and used as a dumping ground. The polluted waters made it a public eyesore. In the drive for modernization, an elevated freeway was built over it in

Before: A concrete highway covered the Cheonggyecheon River. It added more traffic congestion.

After 2005

the 1970s. This only encouraged more motor vehicles, traffic congestion, air pollution, social alienation and the decline of downtown Seoul.

In 2002, the mayor of Seoul led a project to tear down the freeway and restore the waterway that had been buried under the concrete. The project was completed in less than two and a half years. It includes an 8-kilometer green corridor and a 400-hectare park featuring waterfalls and running tracks. The city reused about 75 percent of the demolished concrete to build walkways, fountains and bridges.

Most of the water flowing between its banks is pumped from the Han River through seven miles of pipe. The massive urban renewal project initially drew much public criticism but after opening in 2005 has become popular among residents and tourists.

The return of the waterway has improved the quality of life. Traffic congestion and air quality improved. Families relax and have picnics by the banks of the stream. Even the temperature has cooled by as much as 3.6°C. Property values next to the water increased by 300 percent.

ARE CARS NECESSARY?
Discovery Bay, Hong Kong

Discovery Bay is an upscale residential enclave of about 16,000 people in Hong Kong.

No cars were allowed in this district, which opened its first building in 1982. Residents get around by walking, biking, or riding a clean energy-powered bus that comes regularly at loading bays. For special needs, such as residents with disability, golf carts are available.

The car ban created a clean, quiet and more tranquil environment that made it child-friendly and conducive for raising families compared to the rest of bustling Hong Kong.

In 2014, however, the developer won consent to have taxis and coaches enter with pick-up and drop-off confined to the northern part of the town. The 30-year-old development was served exclusively by ferry until 2000 when a tunnel leading to the North Lantau road was opened.

No wonder Discovery Bay is one of the most desirable (and priciest) addresses in Hong Kong.

Discovery Bay

RESTORING THE WATERS

SAGAY MARINE RESERVE
Negros Island, Philippines

The City of Sagay in Negros Occidental in Central Philippines lies in the Visayan Sea – the geographic heart of marine biodiversity on Earth.

In the '60s and '70s, it was one of the hotspots of illegal and destructive fishing. One man who was not a politician was so fed up with the situation that he ran and won as mayor of the town in order to lead reforms. Thus began the journey of the restoration of Sagay's marine waters.

It has since become the 32,000-hectare Sagay Marine Reserve, patrolled by six boats of Bantay Dagat (Sea Guardians) personnel. Mangrove forests surround one of its islands, Molocaboc Island. When Typhoon Haiyan (local name Yolanda), one of the strongest typhoons in recorded history, hit the island on Nov. 8, 2013, the mangroves protected the island from the storm surge.

With restored corals and mangroves that serve as shelters, breeding grounds and nurseries of fish and other marine life, hunger is no longer prevalent.

Former blast fishermen tend to crabs and other fish in magic holes, a natural and sustainable culture of marine life. Pregnant crabs are not caught, and if caught accidentally, are returned to the sea to release their eggs. Today, crabs – with bodies as large as small plates and claws as wide as a woman's wrists – grow in abundance.

BEACH FORESTS AND MANGROVES

After the fury of 2013 Supertyphoon Haiyan (Yolanda), one lesson was clear. The damage could have been less if we had natural bio-shields in place. Sadly, we have exposed the coastlines by scraping them of mangroves and beach forests.

Five-meter-high storm surges wiped out Tacloban City and other parts of *Perlas*' eastern seaboard.

Perlas has one of the world's foremost experts on mangroves, Jurgenne Primavera of the Zoological Society of London. For the past 40 years, she's been calling for the restoration of coastal greenbelts.

Nine months after Yolanda, with Jurgenne and volunteer fisher folk, we planted 200 native beach forest trees in the high tide line of the SEA CAMP in Bantayan. She said this was the first time beach forest trees were planted anywhere in the country. My hometown outpost was one of the few private open spaces left.

Over the last century, *Perlas* has lost almost

Beach forest trees are planted on the open beach-front of the School of the SEA in Bantayan, Cebu on August 2014. The author (in red hat), Dr. Jurgenne Primavera (right, in black hat) and Lot Villabrille, leader of a local fisher folk cooperative, plant Nature's frontline defense against storm surges.

No time to lose in restoring mangroves in abandoned fish ponds like this in Perlas. *Volunteers who go to the 9.5-hectare Katunggan Mangrove Eco-park in Leganes, Iloilo province also plant their share.*

all of its natural beach forests to seaside resorts, coconut plantations and other man-made structures. Almost half of our mangrove forests have been turned into fishponds and reclamation projects.

With the climate crisis and storm surges becoming the norm, there's a lot of catch-up work to do. Calling all hands on deck!

ILOILO RIVER ESPLANADE

Over the years, the Iloilo (pronounced *eelo-eelo*) River in Iloilo City in Central Philippines turned into a sewer. Everyone turned their back on this blighted waterway. The flow of water to and from the sea was obstructed by illegal private fishpens.

The old Carpenter's Bridge across the river was slated for demolition to be replaced with a larger one beside it. A cultural heritage advocate suggested that instead of spending one million pesos to tear it down, the funds could be used to preserve the historic bridge and make it a pedestrian park. Luckily, the Government listened.

The historic Carpenter's Bridge was saved from demolition and is used today by pedestrians not cars.

Meanwhile, work was started to build a highway perpendicular to the bridge as a traffic bypass for congested traffic. While this was under construction, people started using it for jogging, walking or simply strolling. They wanted to keep it for walking, not cars. However, there were obstructions such as informal settlements and restaurants illegally built on the river banks. A clamor was raised to make the highway a public park, a seemingly impossible idea.

But the stars aligned. A new mayor was elected in 2010. A national lawmaker from

A cleaned-up river flows beside the Esplanade of Iloilo City which opened in 2012. Today it is a favorite leisure spot of locals and tourists.

Iloilo became the Senate President and was determined to clean up and beautify the Iloilo River.

With the people's support and a unified push by officials who set aside partisan politics, tough decisions were made to remove and relocate illegal dwellers, and stop the pollution of the Iloilo River. Funds from national agencies were pooled and the community got behind a major river cleanup. The Esplanade of Iloilo City was born. Today, the 1.2-kilometer promenade by the river is much loved by Iloilo denizens – the rich and poor, young ones and the young once, the powerful and the powerless. Viewing decks and park benches invite visitors to pause and take in peaceful views of the river. From sunrise to dusk, people come to to walk, jog, bike, dance or simply be in the company of each other in the presence of sheer beauty.

Esplanade at night

RESTORING THE EXPERIENCE OF HAPPINESS

Gross National Happiness
Kingdom of Bhutan

While almost all countries of the over-consuming and materialistic world use Gross National Product (GNP) or Gross Domestic Product (GDP) to measure their progress, one country does not.

Nestled in the high mountains of the Himalayas is the Kingdom of Bhutan in Nepal. Their standard of measure is 'Gross National Happiness' (GNH), and is founded on four pillars of Environment Conservation, Cultural Preservation, Good Governance and Sustainable Economic Development.

"GNH is an aspiration, a set of guiding principles through which we are navigating our path towards a sustainable and equitable society," says Singh Powdyel, Bhutan's minister of education. At a young age, children are taught basic vegetable gardening and environmental protection as life skills. Solid waste is managed so as to recycle almost everything.

Bhutan even set up a ministry level office, the GNH Commission, headed by the Prime Minister. It screens all projects based on whether or not they will lead to happiness. For example, the country does not allow the operation of a well-known hamburger chain. Why? Because eating this kind of fast food does not lead to happiness; it leads to illness.

12
FINDING HAPPINESS

Question:
What is the end-goal of human life?

Answer:
Happiness

A survey was conducted around the world to find out what made people truly happy.

The top three sources of happiness are:

1. **Relationships** with family and friends
2. **Work** that is satisfying and meaningful
3. **Leisure time** to enjoy one's interests, hobbies and passions

This seems to be common sense. But the reality is far from common. We seem trapped in the physical world where everything is measured by material possessions and money. We are driven by a need to acquire more, consume more, acquire more, consume more, ad infinitum. We buy things, derive fleeting pleasure from them, then shortly after, tire and throw them away. That kind of consumption is simply waste.

Most of us just want a simple life. But many are tied up in debt, paying for houses, cars, new clothes, appliances, gadgets and other 'stuff.' Suddenly we realize that most of that stuff has little or no value in the experience of genuine happiness.

NEEDS AND LONGING

The goal of human governance, therefore, is to advance the three sources of genuine happiness. But what does economics tell us? The material world uses the standard called Gross Domestic Product or GDP, the total goods and services produced as measured in terms of money.

But GDP is a flawed standard of measuring progress and well-being. Robert Kennedy said it well: GDP 'measures everything… except that which makes life worthwhile.'[1]

Remember what we said about how new words can change meanings and mind-sets? From now on, let us change the meaning of GDP to Great Disaster for the Planet (and People).

In its place, let us use the term 'Common Good' or CG as 'the greatest good for the greatest number…. for the longest time.'[2]

With this shift of measurement, how can humans manage themselves to face their problems? These are challenges of poverty, runaway crime, social alienation, inequality and injustice, the poisoning of the land, the air and the waters, depression and other maladies that plague the world today.

The clue to the answer is not in politics, economics or law. It lies hidden in human philosophy and psychology. It is about how we see ourselves in this world, and about how feelings and thinking affect us and our relationships with one another.

As a species, we have needs that range from the physical to the emotional, intellectual and spiritual dimensions of being human. Psychologist Abraham Maslow called it the Hierarchy of Needs.

Maslow's Hierarchy of Needs

I call it the **Ladder of Longing**. This has four steps:

Physical

At the bottom of the ladder are physical needs. We need food, water, air, shelter, sleep and digestion. A wise man from Central *Perlas* summarized these needs as three K's in the Cebuano language – *Ka-on, Katulog, Kali-bang*. That means good nutrition, good sleep and good digestion/elimination. If any part is missed or messed up, we have a problem.

Air

We need clean air. That means having the Earth's best air-conditioning and air-purifying units in great abundance – plant life. We must avoid fouling the air in any way. And we need open spaces that ensure we breathe in good air as we stay fit with physical exercise.

Water

Water must be abundant, clean, accessible and responsibly priced. There's no room for waste or for the over-pumping of the aquifer (groundwater storehouses). That means water must be cleaned and reused for as long as possible. Storing excess rainwater will take care of our needs when there is no rain.

Food

The solution to hunger is not simply to increase the production of money but for people to go back to the soil to plant what they need for good health – vegetables, herbs and fruits.

Shelter and Sleep

Only when people live in their own dwellings will they fully appreciate their stake in the community and society as citizens; only then will they care. This was the working philosophy of Lee Kuan Yew who caused the building of affordable housing for Singapore's multi-racial people. By doing so, he helped instill love for their homeland.

Sleep is one of the most underrated habits of a stressed-out, hurried and harried modern society. It is in sleep when the body recovers. Lack of sleep compromises the immunity system and makes one vulnerable to diseases.

Only when we are secure and comfortable in our homes can we sleep well.

Emotional

Open spaces for parks and wholesome fun are important for emotional bonding. This is where people can enjoy each other's company in the middle of Nature without having to spend money.

In Singapore, one of the well-planned cities of the world, it is a policy to have parks and open spaces accessible within a 10-minute walk from their homes. London, another well-planned city, has about 60 percent of its land area devoted to gardens and parks.

Learning must be fun, relevant and challenging. Too much competition in the formal school system runs contrary to the nature of humans to cooperate. It crushes the spirit and leads to greed. Sitting all day in a classroom to listen to boring lectures is the best way to kill curiosity. Students would just forget 99 percent of what they are taught. Basic education must also be accessible to all; it must be free or almost free.

Spiritual

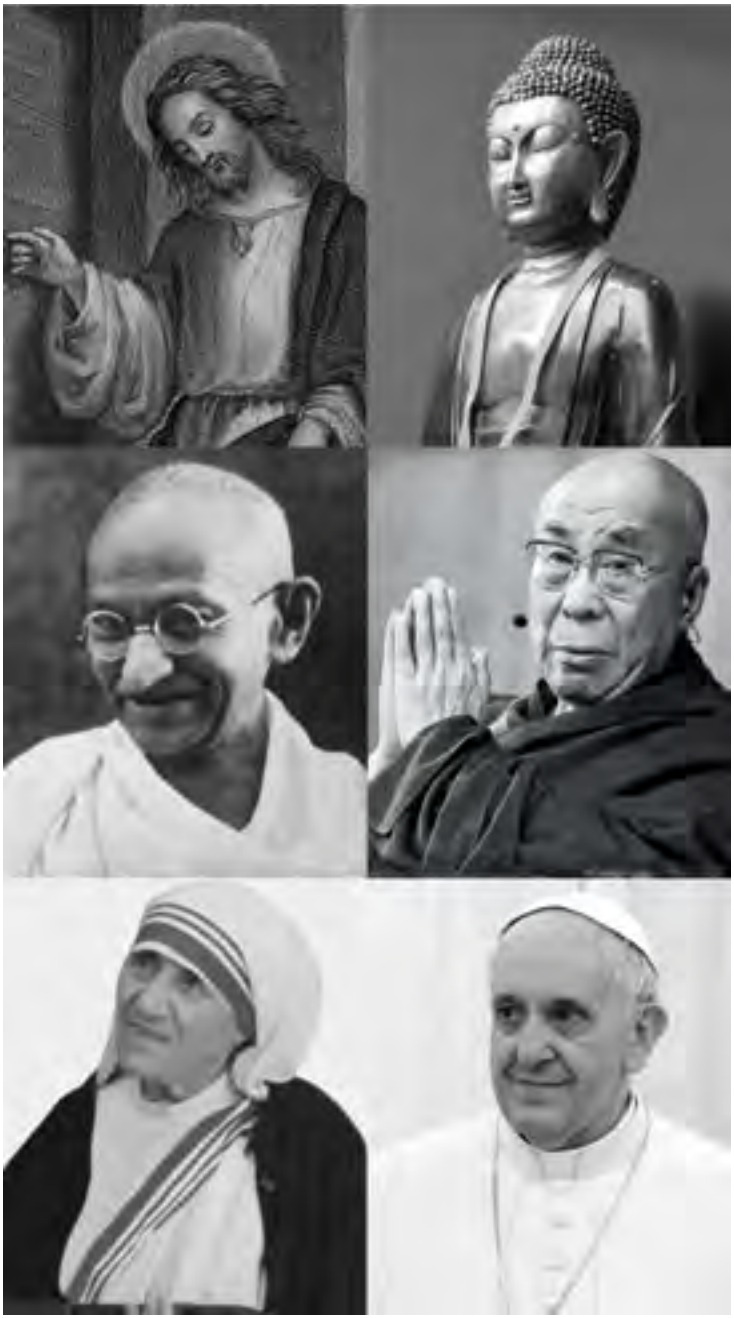
Being spiritual has nothing to do with religion. To be spiritual is to be compassionate and caring, especially for the most vulnerable in society – children, the elderly, sick and disabled, prisoners and the LAW of Life.

Many spiritual leaders have emerged from different corners of the world. Mahatma Gandhi in India inspired millions to choose non-violence in resisting oppression. Jesus Christ showed his love for humanity by laying down his life. The Dalai Lama lives in exile from Tibet but his influence as a Buddhist monk is global. An Albanian nun, now known as Saint Teresa of Kolkata, devoted her life to the care of the abandoned poor, elderly and the dying.

They are like stars.

'I may not reach them,
But I can look up,
And see their beauty...
And try to follow where they lead.'

I believe that deep inside each one of us lies a greatness of spirit that only needs to be unlocked.



12.1 Goal of Governance

There are three imperatives of all animal life:

1. Food
2. Sex
3. Politics

What is politics? It is the way by which all animals – birds, bees, ants, elephants, lions, even crocodiles – organize themselves for peace and order.

In the case of human beings, it seems they cannot easily govern themselves. So they create a structure to which they give up some of their rights in exchange for a secure and harmonious existence.

Politics and The Common Good

The two words are often confused with one other. Politics is the play of power. Governance is about how power is used to manage people for the pursuit of the common good.

What is the common good? It is the 'greatest good for the greatest number…. for the longest time.' This good has a time dimension. Otherwise we would use up everything today and leave nothing for our children and for the future.

POWER GAME

There are two kinds of politics:

1. The game of trying to reach or keep a position of power
2. The use of power to achieve something for the common good

Power is the most intoxicating, addictive and dangerous drug. The first kind of politics has become all about the game of trying to reach or maintain a position of power. This is also called the 'politics of democrazy.'

Perlas and the greatest over-consuming country across the Pacific just went through national elections where candidates spent tremendous amounts of money to win.

Where did candidates get that kind of money? Of course, it came from supporters and funders who want to recover an investment, and make more money if their candidates won. Such is the mess that politics has become. We seem to forget that political governance is all

about organizing people so that we will have:

Peace
Order
Security
Food sufficiency and
Social harmony,
to enable the full blossoming of the human being.

The second type of politics involves the use of available power to bring about positive change. As ordinary citizens, we can play this game and use whatever power we have in our hands to do good for others.

Power of the People

And what power do we, ordinary citizens, have?

The power of thought and imagination, the power of speech and persuasion, and the freedom and power of human will.

Given a situation that is unacceptable, we have innate power in our minds. Thought and imagination give us the ability to see 'what is,' and then think about 'what can be.'

With the power of speech, we can express our sentiments, thoughts and ideas. We can write letters to our leaders and give them suggestions. We can demand change.

A question immediately arises: Will they listen? The counter question: Have you tried making them?

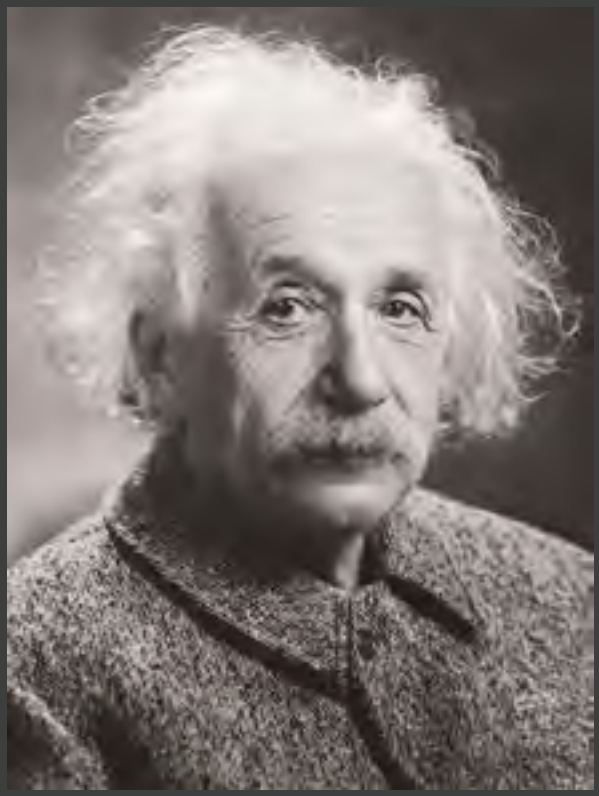
Do not underestimate this gift to influence others. Just look at the reach of social media.

The gift of human will is taken for granted even more.

"What the mind can conceive,
And the heart can believe,
The hands will achieve."

Citizens vote leaders into office. Collectively, we have the last say. Less than a hundred years ago, people were still governed by the absolute rule of one man or a handful of power-driven men. As a result, there ensued wars of unspeakable violence.

Until the 20th century, many peoples of the world lived in countries – called colonies – under the yoke of the more powerful



'Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world.'

- Albert Einstein

countries. It was not until after two World Wars that the powerful countries regained a sense of humanity. They began to treat other peoples as equals and gave colonies their independence. *Perlas* got its independence in 1945 after the Second World War.

It took all of time to get us to where we are now – self-rule, independence and a government of the people, for the people, and by the people. But today, we do not seem to quite understand that. What exactly does that mean?

Shift of Political Play

The goal of governance and politics is to fulfill the basic needs of people so that they can blossom as human beings. It is not about the game of attaining power – self-interest – but using the available power to effect change for the common good – public service.

In the game of using the Life-Sources of Land, Air and Waters, this must be the working principle:

It must last until such time we no longer need it. If we, and other life-forms, no longer need water to drink, air to breathe and food to grow for us and for our children and their children, then by all means, let us go ahead poison them all.

The native Iroquois tribe of America practiced the Principle of Seven Generations. They believed that in making a decision or law, the chiefs must think of the impact into the future up to the seventh generation.

The use of the LAW of Life must last for at least seven generations. In other words, it must last forever.

12.2 Principle, Pathway and Practice

If we see our role as caretakers and guardians of the Earth, many things will follow. We will begin to look at the world differently and accept several basic truths.

The law is nothing more than policy distlled in legal form and language. Policy flows from principles.

Below is a list of some basic truths distilled from many years of experience and insights. It is meant only to tickle your thinking and imagination.

Let us play a mental game and see how they can be applied to make our world fit to live in.

BASIC TRUTHS

Environment
The environment is about life, and the Sources of Life – Land, Air and Waters (the LAW of Life)

Human Nature
Man is more than matter.

Law
The best form of law enforcement happens when the law does not need to be enforced.

Food Security
Food security is not about food. It is about nutrition.

Land
Land is the source of our food.

Air
If we poison our air, we kill ourselves.

Water
Without water, we wilt.

Transportation
Those who have less in wheels must have more in roads.

Money
Money is only a piece of paper with a number. The new currency is the money of moments, memory and magic.

FROM IDEAS TO ACTION

Principle flows into policy. Let's call it a pathway. The challenge is to get things done, to put good ideas into practice.

Principle:
The Environment is about life and the Sources of Life – Land, Air and Water.

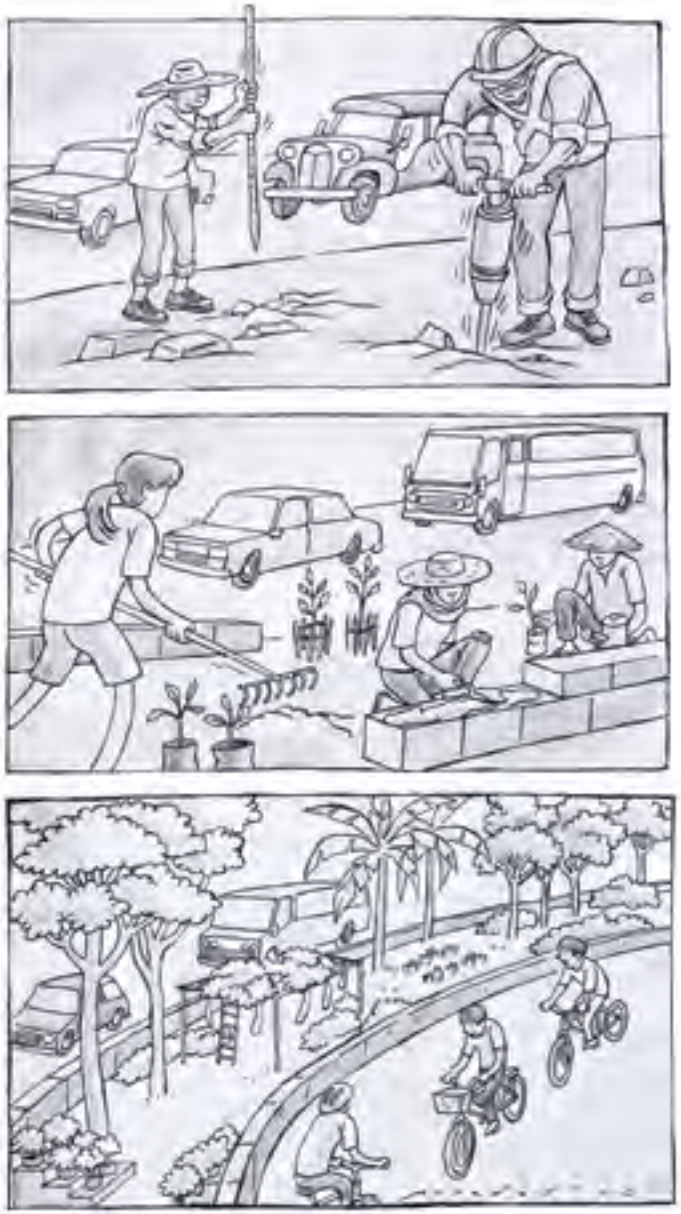
Pathway:
Every effort must be taken to conserve, protect and restore the supply and quality of these life sources.

Practice:
Identify sources of land, clean air and water.

1. **Land** Break up part of concrete roads and parking lots so that more open areas can be planted for food.

2. **Air** Stop poisoning the air with toxic fumes from motor vehicles. Reduce the volume of cars and field efficient, low-energy public transportation.

3. **Water** Stop dirtying the sea and freshwater bodies. Set up marine sanctuaries and reserves. Collect rain-water in gardens, ponds and cisterns.



HUMAN NATURE

Principle

Man is more than matter.

Pathway

Shift away from money-centered entertainment and leisure. Focus on promoting the three sources of genuine happiness – relationships, work and leisure.

Practice
Create open areas and parks where people can reconnect with Nature.

Offer activities for wholesome bonding with family and friends like biking, swimming, camping, fishing, boating, ball games and other sports, gardening, arts and crafts, yoga/ tai-chi, etc.

Open wellness facilities for physical, emotional, mental and spiritual health. This can include 'eco day-care centers' where children are taught how to plant trees and grow vegetables.

LAW

Principle
The best form of law enforcement happens when the law does not need to be enforced because there is voluntary compliance.

Pathway
Use positive stroking to identify and recognize good behavior.

The greatest hunger of man is not for food. It is for appreciation.

If the law must be enforced, and a penalty is handed down, it must be done in a manner that is swift, painful and public.

Practice
Celebrate best practices, success stories and lessons learned from around the country in dealing with pollution, illegal fishing, etc.

Hold on-the-spot recognition ceremonies in the Presidential Palace or Provincial/State Capitol.

Rituals for good behavior generate positive energy. The reward can be non-cash items like rice, scholarships, seeds or planting materials, etc.

Apply compassionate justice. Instead of serving a jail term, let illegal fishers set up marine sanctuaries. Require illegal loggers to plant trees and take care of tree nurseries.

The greatest hunger of man is not for food. It is for appreciation.

FOOD SECURITY

Principle
Good food means good nutrition.

Pathway
Promote a plant-based diet for better health. The source of food must be as close to the user as possible.

Practice
Eat more fruits and vegetables.

Hold demonstration exercises for edible landscaping and edible rain gardens in homes, schools and open spaces.

Remove junk food (cola drinks, chips, candy) from school canteens and nearby stores.

Encourage planting local vegetables like moringa (*malunggay*) and root crops (*camote* or sweet potato) that are easy to grow and cheap.

Hold weekend community vegetable fairs to sell excess produce.

TRANSPORTATION

Principle
Those who have less in wheels must have more in roads.

Pathway
Adopt road sharing. Use half of the road for motorized vehicles and the other half for walkways, bike paths and edible gardens.

Promote non-polluting, efficient mass transportation.

Practice
Redesign roads for more pedestrian/bicycle access.

Use new designs of transport vehicles that use renewable energy.

Break up part of concrete roads. Restore the soil by planting edible gardens.

Put up rain gardens as an anti-flooding measure.

AIR

Principle
Without air, we die.

Pathway
Reduce the number of polluting motor vehicles.

Enforce a road diet to promote efficient use of road space.

Convert some concrete roads into green walkways, bike lanes and urban edible gardens.

Practice
Remove polluting vehicles from the street.

Hold road sharing and edible planting exercises every Sunday. Gradually step up frequency in the hours and days, and spread to more roads.

Adopt energy conservation and energy-efficient measures.

WATER

Principle
Without water, we wilt.

Pathway
Stop dirtying the sea and freshwater sources.

Conserve and reuse water endlessly.

Practice
Set up marine reserves, marine sanctuaries and fish shelters.

Collect rainwater.

Clean up coastlines and restore waterways.

To address flooding, capture runoff water by digging ponds and water channels.

Urge home and building owners to install cisterns to store water.

Offer tax incentives or require this in the Building Code.

Teach schoolchildren simple ways of low water use and recycling.

PLANT
DEXTROSE

MONEY

Principle
Love of money is the root of evil.

Pathway
As *bonus pater familia* (good father of the family), Government must shift its emphasis from making money to what makes people happy: relationships, work and leisure.

Practice
Develop more parks, sports facitilies, community centers and venues for art and culture that people can enjoy for free.

Use taxes to discourage anti-social behavior (multiple car purchases, excessive profit gain, liquor-tobacco use).

Spend taxes on housing, parks and edible rain gardens.

WASTE

Principle
There is enough for everyone to use. But there will never be enough for anyone to waste.

Pathway
Remove the word 'waste' from our mental vocabulary. Replace it with the the word 'used' as in 'used materials,' 'used water,' 'used air.'

Practice
Reduce, reuse and recycle.

Shred plastic. Add this to concrete mixture to make walls, tables and chairs.

Make compost out of food scraps, paper, fallen leaves and organic matter.

Shift from coal-fired power to solar and wind power.

Compost food scraps, paper and other biodegradable material.

Low tide in Bantayan Island

13
THE TIME FOR TALK IS OVER

The health of the Earth and of human civilization is in great peril. Will we be paralyzed by the danger or will we take action?

If we take action, what can we do?

Lever of Power

There are three parts of the picture of a lever long enough to move the world.

The first is the fulcrum, the point on which a lever rests or is supported and on which it pivots. In our example, the fulcrum is the **mind-set** – how we see ourselves in relation to the world.

> *' Give me a lever long enough and I can move the world.'*
>
> *- Archimedes of Syracuse*

The second part is the lever, the **human will**. With this, a world of endless possibilities begins to unfold.

The third element is the **people willing to take action**. The three figures in the previous page are those of a man and two women. Why the gender imbalance?

> *'If you want anything said, give it to a man. If you want anything done, give it to a woman.'*
>
> *- Margaret Thatcher, Former UK Prime Minister*

If we have these three parts, what we can do with the array of problems of the world? After all the battles that I have fought for the land and the forests, the air and waters, I realized that the solutions are right under our noses.

Three action points will begin to move the world in the direction we want. They are:

1. Edible Landscaping
2. Road Sharing
3. A Movement for Climate Justice for Future Generations

These are catalysts – actions that will spark a series of other actions leading to the end-goal.

EDIBLE LANDSCAPES AND RAIN GARDENS

Food and water security will remain the greatest challenges in the near and far future. As we are now seeing, when it rains, there is too much water resulting in destructive flooding. During the dry season, there is too little water, resulting in droughts. This is only beginning.

Food scarcity will become even more severe as the human population grows unchecked amid these conditions:

1. Almost all land in urban areas is paved with concrete. This results in intense heat, flooding and surroundings that are bare and barren of life.

2. Humans are eating unhealthy food that takes so much water and energy to grow in distant places. It takes even more fuel to bring the food from the farm to the family.

Man-made rainwater garden in School of the SEA, Bantayan

Both problems can be turned into the seeds of a solution. How? By thinking the opposite.

Instead of building roads and smothering land with concrete, we can break up the pavement and restore the soil to grow food plants. That is the exciting adventure called edible landscaping.

Do you see the lever that will unleash the power of possibilities?

A road-sharing exercise on Roxas Boulevard in Manila on a Sunday morning, Feb. 7, 2016. The sidewalk takes up one extra lane of the road. Two lanes are devoted to bikeways and one lane for a prototype road train developed by the Perlas government.

ROAD SHARING

If a road is built on land where there are no people, it soon gets filled with structures and crowds. If a road is built in a forest park, it soon becomes a parking lot.

That is only part of the problem with roads. The greater cause of much of mankind's maladies today, and of the climate, is the motor vehicle – the metal monster that breathes poison and has taken over the world. Within the petals of the problem is the seed of its own solution.

Roads can be the lever to change for the better.

We only need to change our way of thinking. We can transform roads that are now used to move cars into roads that will connect people. This can be done in a manner that is most efficient and fun.

With this mental shift, the crisis is turned into an opportunity. With these interventions, the problems of traffic congestion, social alienation, heat, poverty, depression, air poisoning, climate crisis, hunger for food, flooding, etc. will not just be solved.

They will all dis-solve.

CLIMATE JUSTICE FOR FUTURE GENERATIONS

Grandes problemas, grandes remedios.
(Big problems need big solutions.)

- Spanish proverb

If the problem is global, the lever for action must also be of a global scale. The lever is the plan to mobilize the youth of the world. They stand to suffer the irreversible damage and irreparable injury from the kind of climate we are leaving behind. So it is for them to take personal and collective action.

Other people can participate in local actions for edible landscaping and road sharing. On a global scale, these movements can light fires that will prod people in power to take serious and sustained actions for change.

Global Game

One game that this movement will play is a collective legal action by the children – representing themselves and generations yet unborn – in the courts of justice. The children, backed by a crack team of legal experts and doers, can ask the courts a simple question:

"Under the Law, what are the duties of States to protect humankind of the present and future generations from the climate crisis?"

This question can be framed according to local and regional conditions.

TWO-WAY CHANGE

Social change usually happens in two ways – top-down or bottom-up. Top-down change is fast, but does not last. When new people take over the reins of power, especially those from opposite parties or ideologies, they change almost everything. Even if they belong to the same party, the newcomer always wants his own brand for projects. Thus he will reinvent the wheel if only to say that it is his project. That's normal human ego at work.

Bottom-up change is lasting but the process is very slow, costly and cumbersome. When people start change from the bottom but this is not met by those at the top, confrontation happens, sometimes even violent conflict.

The best setup comes about when the top meets the bottom, and the bottom meets the top. This is called the 'sandwich theory' of social change.

In the language of *Perlas*, this is the theory of the *bibingka* – a tasty rice cake with coconut milk cooked with live coals above and below the food. It cooks faster and better this way.

How to cook *bibingka*:
Coals are placed above (1) and below (2) to make the rice cake (3)

13.1 Edible Landscapes and Rain Gardens

What if food sources were just outside our houses, by the roadsides and in nearby open spaces? Vegetables, fruit trees and herbs growing on available soil will turn urban dead spots into a green and edible landscape.

It would solve many problems of the world today – food security, flooding, water scarcity and social isolation, among others. It will develop confidence among the people to be self-reliant and will also restore their sense of pride of place.

The idea of edible landscapes and community gardens is a matchstick that can ignite subtle yet powerful forces of change to produce multiple benefits:

Community garden cultivated by immigrants in Bolzano, Italy

a. Hunger will be History

People will eat more vegetables and fruits, the healthiest diet. And when they grow their own food, there will be abundance. The problem of food poverty can be solved.

b. Spirit of Sharing

In scarcity, people steal.
In abundance, people share.

Gardening promotes interaction among those who tend the soil and the plants. They will be harvesting more than they can eat and will begin to share their produce. This rekindles the basic human instinct of cooperation and sharing.

c. Reconnecting to the LAW of Life

With a garden, we will begin to understand that the food we eat depends on the delicate and wonderful interaction between the three Sources of Life – Land, Air and Water. Thus, we are able to reconnect to our own nature.

The joy of growing, harvesting, eating and sharing the fruits and vegetables that we grow ourselves is a joy like no other.

d. Healthier People

People will get more physical exercise with gardening activities. Of course, they will also be eating healthier and cleaner food.

e. Cheaper Food

A large part of the cost of food is the cost of transporting the produce from distant farms to our dinner tables.

With food growing in or very near, our homes, even on the outer walls of our houses, food will be free. Plants growing on walls will absorb the heat of the sun and by the magic of photosynthesis will turn it into food. This will reduce the heat inside the house because the vertical garden will serve as a natural coolant of the interior.

'He who plants a garden plants happiness.'
- Folk Wisdom

A swimming pool is turned into a sunken garden of herbs in Cebu City.

f. Less Climate-Disrupting Gases

Imagine the energy cost of tractors that till the farms, the trucks, boats and planes that transport our food.

That is called the carbon footprint, the tremendous volume of carbon dioxide (CO_2) released into the air that is making the Earth hotter. If food plants were growing right next to our homes, we would reduce the release of hot gas.

g. Carbon Capture

Do we remember our basic science? Plants exhale oxygen, which people inhale. We exhale carbon dioxide, which plants absorb. But today there is a dangerous imbalance. The air is overloaded with carbon dioxide from excessive burning of carbon matter (coal and oil).

So what is the solution? Plants. They will absorb as much carbon dioxide as they can for their own growth.

In the world we want, roads, highways, parking lots now paved with concrete will need to be broken up. Large chunks of it must be restored into soil and turned into edible rain gardens.

RAIN GARDENS

Why is there flooding?

Because excess water has nowhere to go.

A rain garden is a simple remedy. Dig a hole in the ground to collect and absorb the water runoff. The generic term for this is rainwater collector but I prefer calling it 'rain garden' which is more appealing and excites the imagination.

Learn how to make one in your own yard or beside your apartment or office building.

Runoff water

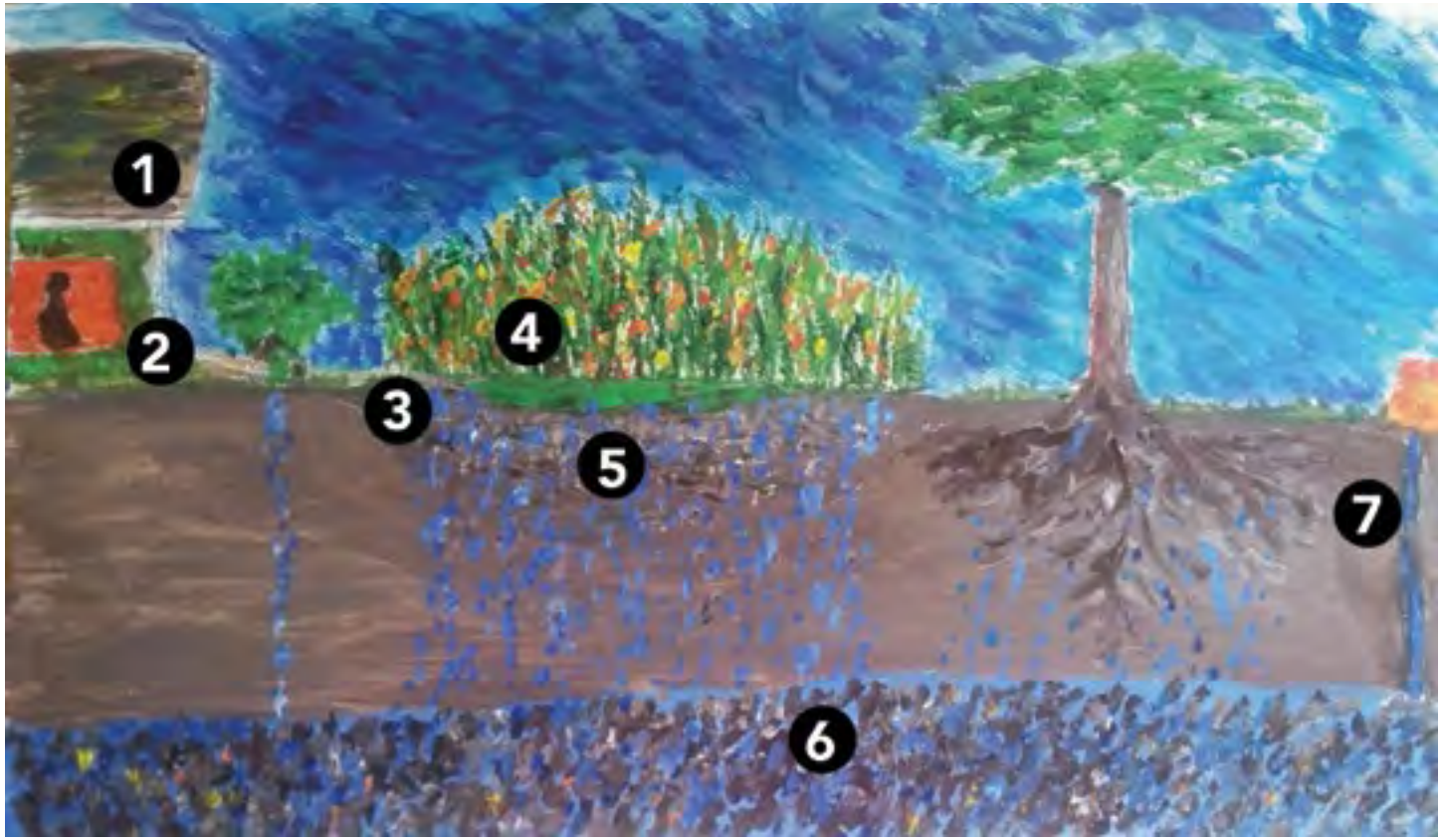
Roofs, roads, parking lots and other solid surfaces gather massive volumes of rainwater. Not all of this water can be absorbed. Some simply spill off into drainage canals (thus the term 'water runoff'). In cities, where sewers are clogged by garbage or human structures, water overflows and causes flooding.

Rain garden in the State University of New York, College of Environmental Science and Forestry

How a rain garden works

1 Rain falls on roofs, gutters and concrete surfaces. Not all the water can be absorbed in the soil.

2 A downspout directs the water to a hole in the ground or pond that will absorb the excess water.



3 The water can drain to a nearby rain garden which can be left open or covered with sand, rocks and soil. This can be planted with ornamentals or food plants.

There are two kinds of rain collectors. One type has a bottom not paved with concrete to allow water to percolate or seep back into the ground. Another type is a concrete container or tank to store water for future use.

4 Edible plants (vegetables, herbs and fruits) can be planted on the banks and surface.

In tropical countries, easy-to-grow and nutritious edibles are the KKK combination of *kangkong* (morning glory spinach), *kamunggay* (moringa) and *kamote* (sweet potato). Other nutritious

edibles are *alugbati* (Malabar spinach), and mung beans.

5 Covering the area with a few inches of rocks and sand will allow water to seep into the ground to replenish the aquifer beneath the groundwater table.

6 The aquifer is an underground layer of water-bearing rock, gravel, sand and silt from where wells draw water.

7 This is the place we pierce to dig or drill wells. Over-extraction is a big threat. If the aquifer is not replenished, it will dry up.

Question: Where do we get the land to develop rain gardens and edible landscapes? From right under out noses.

City kids are shown how to harvest bokchoy in the mountains of Balamban, Cebu

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13.2 Road Sharing Movement

A BOY AND A CAR

Once upon a time, there was a poor boy. He could only afford to eat vegetables and had to walk five kilometers to school every day. On the road, flashy cars zoomed past him. When it rained, he got splashed with dirty water from the puddles.

"One day," he said, "I will be rich and buy a car."

He studied hard, went to university and later became a successful lawyer. He bought a fleet of cars and let drivers bring him to his appointments and court hearings. He could afford to eat anything he wanted – mostly fast and fat food.

This lifestyle of the rich went on for a few years.

One day, in the middle of an intense trial, the lawyer suddenly collapsed. He was rushed to the hospital and ended up in the Intensive Care Unit. There he lay in a coma for 40 days.

When he woke up, the lawyer was happy to be alive, but was very scared. Sobbing in anguish, he asked, "Doctor, what's wrong with me?"

The doctor said, "Sir, you have clogged arteries, congested lungs, diabetes, hypertension, high cholesterol, failing kidneys, high uric acid, etc. You have all the ailments of the rich and sedentary. In other words, sir, your health is in a state of crisis."

"Oh, doctor, what must I do?" asked the lawyer.

The doctor said, "Eat vegetables and walk five kilometers a day."

Car-diac Arrest

The lawyer's car-diac arrest is the story of our car-centered transportation system. Even at a young age, people aspire to own a car. With the explosion of so many vehicles, the roads – like our lungs and arteries – are all clogged up. We have reached a state of extreme crisis.

Recall the Chinese picture-word for crisis that is made up of two parts: 'danger' and 'opportunity.' In a choking city, the danger is clear – total traffic paralysis, stress and poisoned lungs, among others. The opportunity is also clear. We must find a solution that is creative, effective and fun.

How?

Take the doctor's advice: Go back to basics.

RUSE OF ROADS

How did cars become so popular, so desired as a means of transportation and such a status symbol?

The self-interest of carmakers and governments conspired to build more roads to increase the demand for vehicles.

In the 20th century, oil was widely used because it was easier to handle than coal. This was also the time of mass production of a moving metal box on wheels. Car production rapidly increased after the mid-20th century.

At the end of World War II, companies in the United States which had been busy making war armaments had nothing left to do. The Secretary of Defense was also president of the largest car company that produced military hardware during the war. Together with other car manufacturers, they decided to continue their industries by shifting from making military hardware to making cars. But there were two obstacles to this plan.

First, the trolley, train and public transportation system in the U.S. was very good. The City of Angels, the seat of Hollywood, had 400 miles of rail lines which served hundreds of thousands of riders a year.

Second, there were not many roads. The public transportation system did not need many

The car with its oil-fired internal combustion engine is the single biggest cause of damage to the Earth.

wide roads because it was already moving people efficiently.

What did businessmen do? Carmakers conspired to buy most of the train and trolley lines, ripped out the metal rails or paved them over with concrete to make more roads. This provided space for the cars they wanted to sell. It also wiped out the competition.

This was a criminal act. The conspirators were charged for their violation of the Anti-Trust Law, were found guilty and fined.

But the stage was already set for the making and selling of more cars.

Their second solution was even more creative. After World War II, national security was of highest importance. The Secretary of Defense used this primal paranoia to the car industry's advantage. He advised the U.S. President to use federal funds to build inter-state highways to connect cities and states in the interest of national security.[1]

So instead of developing trains for efficient transport over long distances, the fire was lit for the global scourge of more and more cars.

Car-Crazy, Fuel-Foolish

Thus began the mania for cars and the obsession for road building that lasts to this day. Billions of dollars are spent on roads to make space so that the car-cabal can sell more cars and 'oil-igarchs' can burn all the fuel it can sell.

All this road building ignores the basic truth that transportation is not about roads. Transportation is about moving people from one point to another in a manner that is efficient, reliable, convenient, inexpensive and fun.

Monkey See, Monkey Do

The car didn't just mean personal convenience and mobility; it became a status symbol. Not having a car – and seeing one's neighbor driving

'A developed country is not a place where the poor can buy cars, but one where the rich ride public transportation.'

- Enrique Peñalosa
Former Mayor of Bogotá, Colombia

one – was a sure way of feeling poor. Owning a $15,000 car when your neighbor has a $50,000 model only intensifies the feeling of envy.

Owning a car became an aspiration and a mark of success. This is especially promoted by the City of Angels, where movies are made. When movie fans see cars being driven by good-looking actors, this is a subtle but powerful strategy to sell the idea of cars to the world. Hollywood doesn't bother to show how cars in the City of Angels are constantly stuck in traffic.

So the world followed suit even if there were very few and very narrow roads. Monkey see, monkey do.

Roads and highways have become so clogged with vehicles that the whole purpose of transportation – moving people efficiently – has been forgotten.

This is made worse when political leaders go to the City of Angels (more like the City of Automobiles.) There, 'polluticians' fall in love with the fast cars they see their friends and relatives driving.

When the officials go home to *Perlas* and other LCCs (Low-Consuming Countries), they try to copy the freeways and huge parking lots. But freeways are neither moving freely, nor are they trouble-free ways of going anywhere.

Ask an Angeleno what the freeways look like during rush hour. He would tell you that they are slow-moving parking lots.

"todaysroadiswherecaraftercarismovinglikethis"

QUESTIONS

1. Are we happy with traffic? No!

2. Why is there traffic? Because there are too many motor vehicles, especially private cars.

3. What is the solution – to add more cars?

4. By the way, who is smarter: Ants or human beings? Of course, humans.

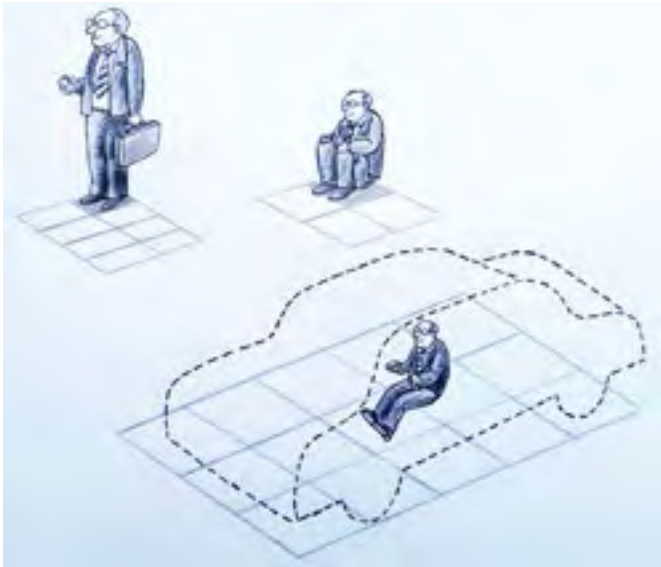
   Even if an army of ants is crawling about, why don't they suffer traffic jams? Because they follow a single line. That is the 'Principle of the Ant.'

RETHINKING OUR TRANSPORTATION SYSTEM

The case of *Perlas* and of other countries with small land areas is a perfect example of putting a square peg in a round hole. It does not and will never fit. Private cars with their oil-burning internal combustion engines are the most inefficient way of moving from one point to another.

Waste of Space

A person standing up occupies about one-eighth (1/8) of a square meter. Sitting down, he occupies about one-fourth (1/4) of a square meter. Using a car, he will occupy 13 to 15 square meters, and the vehicle is not yet even moving.



Compare this with a bicycle. The road space used by a car can accommodate 15 bicycles. Or 60 people standing up or 30 individuals walking.

In urban areas, the most precious commodity is space. Why then are we wasting so much space trying to copy the car-crazy lifestyle promoted by Hollywood and the car industry?

At an international car show in Metro Manila, the capital of *Perlas*, a senator gave the keynote speech. He said the people's "116-year-old love affair with the automobile (has) brought us pleasure, but also pain – there's traffic, there's pollution, there are accidents – things we cannot deny."[2]

As of 2016, there is one motor vehicle (including motorcycles) for every 12 Filipinos, or more than enough to form a single line that would stretch 31,000 kilometers, equal the length of all national roads. Worse, only one of every one hundred Filipinos own cars. Yet all of the roads are given to cars and to motor monsters.

Metal and Money

To move from one point to another in a car, a person weighing 70 kilos will ride a machine that uses 2,000 kilos of steel. Is this an economical and efficient use of steel?

Car *Bus* *Bicycle*

The cheapest sub-compact car costs about 700,000 *pestehas* in *Perlas*, about US$14,000. That is more than enough money to send several kids to university in my country.

Add to the price of a car the cost of maintenance and other incidental expenses: interest on amortization, oil change, engine tune-up, change of tires, insurance, gasoline, parking and toll fees, repair of dents, etc. This adds up to at least $400 per month (about 20,000 *pestehas*). This is more than double the monthly minimum wage in *Perlas*. That amount can buy 10 sacks of rice, enough to feed at least 10 families for a month. And yet we just burn that amount.

Choosing to ride a car is more expensive than you think.

Let's play a game. Take out a $20 bill from your pocket (about 1,000 *pestehas*). Light a match and burn it. Is that a good idea?

Is that not what we do every time we buy gasoline? We exchange money – a piece of paper – for a flammable liquid called gasoline and then burn it.

Poisoning Ourselves

Let's play another game.

Start the engine of a motor vehicle and ask someone to rev it up while you go behind the car. Kneel down and put your nose just outside the car's tailpipe. Then inhale the fumes for two minutes. What happens?

Warning: Please do not try this without the supervision of a representative… of the funeral parlor.

Is this not what we are doing to the air that we breathe? Poisoned gas is released from billions of motor vehicle tailpipes all over the world. In *Perlas* alone, 10 out of 11 respiratory cases are reported in the capital of Metro Manila.

Hey, Mr. Ex-Con Economist and Mr. Spokesman of the car industry, do you call this is progress? Yes, it is progress… to the grave. It is also a contribution to GDP – Great Disaster for the People.

Time Lost

The stress and time wasted traveling a few kilometers has become unbearable. People are very angry at the extreme traffic congestion in metropolitan areas, whether it is in Metro Manila, Cebu, Beijing, Bangkok, Los Angeles, Nairobi or Jakarta.

We all want to escape the 'Car-maggedon.' I call it 'car-diac arrest' because the condition is

such that it immobilizes us all. In Metro Manila alone, the economic loss due to traffic congestion reaches three billion pesos a day or US$21.9 billion a year at the exchange rate of P50 to $1. This is almost one-third of the entire national budget of *Perlas* for 2017.[3] Is this progress?

The money cost is not the biggest concern. The hidden and most destructive impacts are on health and time lost from the company of family and friends.

In the late '80s until the late '90s, I used to spend three to four hours on the road driving to and from my home in Cavite province to my law office in the financial center of Metro Manila. I would leave before dawn and come home long after dinner just to avoid the traffic. I hardly saw my children while they were growing up.

I have few regrets in my life. Having to spend so much time sitting in traffic away from my family is one of the very few. One of the reasons I gave up my conventional law practice in the 1990s was to avoid this highway Calvary.

The transport torture made me think hard about how to solve the traffic mess. The solution, after all, is simple as we will see shortly.

Over the years, the problem has only gotten worse. More roads are being built or widened, adding to the congestion.

Very good. Maybe the traffic crisis will finally spark a revolution to find a solution. There is a move in *Perlas* to increase the excise tax on cars. But unless the price of cars is tripled and public transport is improved, a higher tax will not make a dent.

Water Waste, Flooding

To clean motor vehicles, we use up so much clean and drinkable water. With El Niño and worsening droughts brought about by the climate crisis, water will be more precious than gold.

If there was no more water left to drink, would we still wash our cars with drinkable water?

To build roads to accommodate more motor vehicles, we pave over soil with concrete. When it rains hard, the land no longer soaks up the water. The result is flooding.

From a living land full of plants and butterflies, we turn it into a hot and dead surface of concrete where nothing grows… except road rage.

Unfair Road Use

Perlas has a population of about 102 million people. Less than two percent (or less than two million people) own cars, yet all of the road space is given to motor vehicles. The great majority lack proper public transportation. Sidewalks are removed or reduced to make way for more cars. Is this fair? In the language of the Constitution, this is "unequal protection of the laws." It is outright discrimination against the poor.

Urban road space in Perlas is mostly used by motor vehicles even though less than two percent of the population own cars. Those who walk are left with small sidewalks or none. Is this fair?

Loss of Life

Motor vehicle accidents are the cause of loss of life and limb to millions of people every year. If an airplane fell out of the sky and crashed to the ground every day, killing innocent victims, wouldn't we begin to think there is something wrong with the aircraft?

The number of people who die every year in

road accidents is much more than the count in aviation crashes. Yet our leaders continue to encourage more cars and individual motor vehicles by building more and more roads.

Unhealthy Lifestyle

Doctors tell us that to stay fit, we must walk at least 10,000 steps a day, or about five kilometers. How much walking do we do? Not much.

In the city, those who can afford to go to a gym park their cars closest to the door and then spend 30 to 40 minutes walking or running on the treadmill.

Remember our story of the poor boy and the car? When we get sick from a lifestyle of the rich and lazy, the doctor's prescription is to exercise and walk five kilometers a day.

Climate-Crazy Gases

Experts estimate that motor vehicles are the source of more than 50 percent of all climate-disrupting gases released into the air.[4]

Look at the life cycle of a motor vehicle and the heat it generates in carbon dioxide and other hot gases. This starts with the intensive use of energy to manufacture cars and supply fuel. It includes the heat caused by concrete roads and pavements. It also counts the super-hot gases used in mobile air conditioners.

Consider:

- Mining, smelting and the manufacture of steel to make these 'metallic horses'
- Mining, refinery and distribution of oil to make gasoline and diesel
- Mining of rocks and sand to make roads
- Making of asphalt and cement to make concrete roads
- Removal of natural forests to plant rubber trees for the raw material for rubber tires
- Heat-island effect from concrete roads shorn of plants
- The inability of water to be absorbed by the land because it has been paved over with concrete
- Heat from super-hot gases called HFCs (hydro-flourocarbons) used for car air-conditioning units
- Carbon dioxide, carbon monoxide, sulfur dioxide, nitrous oxide and other poisonous gases released by motor vehicles.

Why do we insist on building more roads and adding more cars?

Political leaders see roads as a 'concrete' achievement in their track record. Some infrastructure projects also come with big kickbacks. For ex-con economists, roads spark economic progress even though it actually ignites terrible traffic.

When new cars are released from factories and showrooms, do they come with new roads? Yet we buy more motor vehicles to fill up already-clogged roads. In the study of human psychology, this is called the 'inertia of collective insanity.'

What do we need to do? We must not only think out of the box, we must jump out of the box, turn it upside down and then shake it.

Only then will there be real progress in human thought.

Turn around the road system 180 degrees. Make the roads more narrow.

MIND SHIFT MOMENT

If building more roads to solve traffic congestion is like pouring gasoline to fight a fire, what is the solution? Turn around the road system on its head by 180 degrees: Make the roads more narrow.

No, this is not a joke. Abundance breeds waste; scarcity breeds efficiency. Bigger roads trigger wasteful use. Smaller roads lead to wiser use.

Another way is to follow the Principle of the Ant. Countless as they are, ants do not have traffic jams because they move in single file.

We can improve traffic flow right away by providing exclusive lanes for collective (public) transportation. Buses and trains can travel in single file, in ant-like fashion.

Wide sidewalks of at least three meters must be set aside for people to safely walk or bike. If public transportation is safe, reliable, convenient, inexpensive and fun, car owners would be happy to leave their cars at home. Or feel no need to buy a car.

Exclusive lanes for buses and other public transportation would look like this:

But there are still too many cars on the road using up so much space to move so few people.

ROAD SHARING

Those who have less in wheels must have more in roads.

A simple solution is Road Sharing. Divide the road in half: Half for motorized vehicles moving efficiently, and the other half for people to walk, bike and plant food gardens.

Road sharing requires a 180-degree mind shift from the present car-crazy and fuel-foolish transportation system:

- From building more roads for cars to providing more spaces for people to move
- From favoring wasteful private transportation to giving priority to efficient public (collective) transportation
- From road widening to a road diet
- From road greed – scrambling for the last square inch of the road – to sharing the space

How can we show that it works? Experience is the best teacher. When people actually breathe cleaner air, feel the vitality of the community and move around freely in an orderly manner following the Principle of the Ant, the idea of road sharing will come to life. Many benefits will cascade to society. The change will:

1. Restore order and discipline on the road
2. Dissolve traffic congestion
3. Make travel time predictable
4. Increase disposable income

Those who have less in wheels must have more in roads.

5. Ensure fair use of public space and public funds
6. Lower transportation costs
7. Improve public health as more people who would be walking, biking, exercising and breathing cleaner air
8. Free up space for community food gardens
9. Reduce the importation of fuel
10. Restore a sense of community and belonging
11. Reduce crime through more transparent movement of people
12. Increase the income of public utility operators
13. Spark the growth of local makers of rail-based trains, trams, trolleys and other collective transport systems
14. Restore pride of place and pride of people, especially when visitors admire the improvements
15. Reduce road accidents
16. Clean the air and cool the local climate
17. Reduce mining of ore for steel and rock aggregates for roads
18. Reduce release of heat and use of energy from the heat-and-energy intensive manufacture of cement and steel

Wide sidewalks and bike paths in European cities of Paris (left) and Barcelona encourage people to do away with cars for short and medium distances.

19. Reduce the use of artificial air-conditioning. With less vehicles on the road and more plants growing, people can open their windows to let fresh air in
20. Increase quality time for family and friends
21. Make more land available for parks, edible gardens and non-monetary leisure
22. Solve flooding with more lands available for rain gardens, ponds, streams, wetlands and lakes
23. Reduce by half the release of gases that is causing the climate crisis.

Is this bad news for carmakers? No, it is an opportunity to adapt to the new mind-set and then retool manufacturing facilities to make better public transportation systems.

On a personal note, I am not against cars. I am against the mind-set of having to spend a lot to buy and maintain a car that only worsens traffic congestion, when all I need is the service of moving from one point to another.

In times when we need the personal convenience of individual transportation, car sharing services can fill the need. This is starting to happen in Europe and parts of the United States such as the Zip car system in the San Francisco area. In Vauban in the green city of Freiburg in Germany, residents do not own cars. They walk, ride a bike or take public transport. When they need a car, they go to the common garage and take one unit from a membership pool. They pay a nominal amount for the use of the car and cost of gas.

Bayanihan sa Daan

The essence of road sharing is the use of roads and public space by all stakeholders in the most efficient and fairest manner possible.

In the language of *Perlas*, we coined the term *Bayanihan sa Daan* to describe the change.

Daan (pronounced 'dah-AHN') means 'road' or 'way.'

Remember the word *Bayanihan?* It comes from two beautiful words: *Bayan* – community, nation, homeland or citizens; and *Bayani* – hero.

Bayanihan means 'cooperative heroism' or 'community spirit.'

Half the road is used for people to walk and bike, and half for motor vehicles in Pasig City, Metro Manila. Road sharing happens every Sunday morning in Caruncho Avenue in front of City Hall.

A Suggestion?

By the way, this road reform is not a suggestion, it is a law.

In 2008, the President of *Perlas* issued Executive Order No. 774:

"The Department of Transportation shall lead to transform the transportation sector. The new paradigm in the movement of men and things must follow a simple principle: Those who have less in wheels must have more in roads. For this purpose, the system shall favor non-motorized locomotion and collective transportation systems ….

"The Department of Transportation and the Department of Public Works and Highways shall immediately transform roads using aforesaid principle.

"All provinces, cities and towns are mandated to support the change.

"The DILG (Department of Interior and Local Governments) shall coordinate with all LGUs to transform the road system to favor persons who have no motor vehicles."[5]

Edible Gardens

If part of the roads will no longer be used for cars, space will be available to plant vegetables and fruits. A concrete section of one or two lanes (about 3 to 6 meters wide) and one kilometer long can be broken up and returned to soil to grow community food gardens. With fewer motor vehicles, the air will be cleaner and will not poison the food plants.

Even edible gardens are part of the law in *Perlas:*

> "Public open spaces along sidewalks and roads no longer needed shall be devoted to urban agriculture for fruits,

vegetables, medicinal herbs and plants. Anyone who wants to plant but has no land shall be lent use of land under an urban edible garden agreement." (Section 12, EO 774).

But alas, in the Land of Pearls, many laws are only suggestions.

PUTTING POLICY INTO PRACTICE

What does it take to make this change happen?

1. Favor people over cars.

This is the daily torture chamber of cars on EDSA, a main arterial road in Metro Manila.

Three of the five lanes are occupied by about 70 private cars carrying at best 200 passengers. All the passengers could fit into four or five buses. If that would actually happen, the road space would suddenly become vacant.

The vacant space can then be converted into safe (and covered) sidewalks, bike lanes and edible gardens. One lane can still be used for private vehicles. The mind shift is starting to happen with the introduction of P2P (Point-to-Point) high-quality buses in Metro Manila which charge about $1 fare and offers comfortable seats, free Wi-Fi and television on board. What is still needed are dedicated, fast-moving lanes for public transport vehicles.

2. Give people space for non-motorized mobility.

"Build it and they will come."

What if we built wide and covered walkways and bike lanes of 3 meters to 6 meters wide – the width of one or two road lanes?

But first, we must remove and/or relocate all obstructions from the sidewalks and streets.

The legal basis to ban roadside parking and sidewalk stalls is clear.

Public space is reserved for public use. It cannot be used for private parking and vendor's stalls to benefit one or two to the exclusion of all. These are a 'nuisance' as defined by law because they obstruct or interfere with the free passage of a public highway or street.

Removing road obstructions is a task for local governments. This does not happen often, though, because of wrong-headed populism of its leaders.

Kinds of Roads

Roads in *Perlas* are classified as national, provincial, city, or barangay (village) roads, depending on which government agency maintains the road. This system is one of the main reasons we are in this mess.

In the study of transportation and urban planning, there are three kinds of roads based on their use:

1. **Arterial Roads** connect one city or town to another. They are best served by high-capacity/mass transport systems.

2. **Collector Roads** connect local roads to arterial roads. These roads are narrower. Most can be transformed into sidewalks and bike lanes, and even edible landscapes.

3. **Local Roads** bring people to their homes and are bordered by buildings and homes. These roads are generally narrow. Depending on the width of the road, private motor vehicles must be restricted to only one or two lanes running in one direction. Better yet, they must be turned into walk-only/ pedestrian roads, with provision for deliveries and transport of persons with disabilities (PWDs), the elderly and emergency vehicles.

In Shanghai, a road train serves a moderate capacity of passengers.

Collector roads can be served by road trains like this fun version with red coaches in Oslo, Norway. Imagine jeepneys in Perlas connected to each other and turned into a hybrid.

Bayanihan Road Train or BaRT. Why not?

In Barcelona, Spain, the district of Las Ramblas attracts tourists and locals because many roads are only for pedestrians. The scene is very lively with people strolling among the stores, open-air stalls and restaurants in the area.

The Esplanade along the Iloilo River in Central Perlas was built after a major cleanup of the city's river.

Today, it is a well-loved public promenade.

A hybrid road train that runs on diesel and electric power is being developed by the Perlas government. The prototype can carry 260 passengers.

HOW TO START

Here's a sample action plan for Road Sharing:

1. **Right of Way** Identify and mark out the road-right-of-way of all paved roads. Half of the road will be used by motorized transport; the other half is reserved for people to walk, bike or plant edible gardens.

Arterial and Collector Roads must have one or two lanes dedicated for collective or public transportation like the Bus Rapid Transit (BRT) System.

2. **Cleared Sidewalks** Clear and expand sidewalks so that people will have safe and convenient spaces to walk.

3. **Ant-walk** All vehicles must follow a single line – the Principle of the Ant. All buses and public transportation must observe proper stops and loading bays.

4. ***Alis-Puno*** (leave when full) If the bus leaves when it is full or almost full of passengers, cutthroat competition among drivers and transport owners will vanish.

In *Perlas*, the problem of over-speeding buses and unruly drivers who stop anywhere to drop off and pick up passengers is directly linked to their so-called boundary system. Under this system, drivers have to meet a daily quota of road trips and revenue that is a basis for their earnings and to ensure a profit for the owners.

Note: The *alis-puno* system is only to be done for the first few weeks. The aim is to gather enough data for operators to set the best travel and dispatching schedule.

5. **Sundays** Start road-sharing pilot projects on Sundays when traffic is light. Then gradually extend the hours and roads covered. Any revolutionary mind shift cannot happen overnight. It must be done in small, hardly noticeable steps.

A Design for Shared Roads

1. Arterial and collector roads can be divided by half — half for motorized vehicles and half for wide sidewalks and bike lanes as well as edible landscaping.

2. The half that is devoted to motor vehicles will be used for high-capacity solar/renewable energy transport running in an organized and orderly manner. Cars may still have their own lanes, but carpooling must be encouraged.

3. The divider between the lanes can be devoted to edible rain gardens. People who want to plant can organize themselves into small cooperatives and assigned an area where they can grow vegetables and harvest their produce for personal consumption or for sale.

4. Use solar-powered streetlamps that automatically shut off at sunrise.

5. Waterways will be cleaned so they can be used to irrigate the edible gardens.

'You may say that I am a dreamer. But I am not the only one.'

- John Lennon, *Imagine*

PROGRESS

The Road Sharing Movement is not the dream of one man. It is a collective dream of a world stuck and suffering from 'car-diac arrest.' This is especially true in low-consuming countries like *Perlas*, Indonesia, Thailand, Kenya, Egypt and even in cities of Over-Consuming Countries like Los Angeles, Washington DC, Honolulu and others choking in traffic.

The transformation is happening in many versions around the world like Brazil (Medellin and Curitiba), in the U.S. cities of Eugene, Portland, Irvine, New York, in Singapore, Kyoto and *Perlas* cities of Pasig and Marikina. The more developed models are in European cities like Copenhagen, Amsterdam, Barcelona, Berlin, Vienna and Paris. These are the models we should be looking at.

In *Perlas*, there is a growing movement of citizens trying to sow the seeds of road sharing. It started with an experimental closure of the busiest road in the central island of Cebu on June 12, 2011, Independence Day of the tropical country. For one whole day, a 2.3-kilometer stretch of Osmeña Boulevard was closed to motor vehicles and turned into a park.

This inspired the City of Pasig in heavily congested Metro Manila to follow the exercise. Every Sunday, the main 1.3-kilometer road of its financial district – F. Ortigas Avenue – is now a fully pedestrianized road. Four of its main roads – two along the Pasig River, the other one in front of City Hall and another recently opened – are shared with pedestrians and cyclists.

Walkers and cyclists use half of the East Bank Road of Pasig City every Sunday.

PHILIPPINE DAILY INQUIRER

'Give us back our roads'

SC petitioners fed up with traffic jams, air and noise pollution

Filipino children and students were among those who petitioned the Supreme Court to compel the government to use a road sharing scheme. Will they win?

ON THE LEGAL FRONT

On February 17, 2014, a group of law students, cyclists and ordinary citizens, backed by a team of young lawyers, filed what may well be a watershed case to implement the road-sharing principle. The petition awaits decision by the Supreme Court of *Perlas*.

Win or lose, the point was made.

In the meantime, citizens and advocates have been reaching out to public officials show the examples of road sharing on the ground.[6]

ON THE POLITICAL FRONT

National

Friends in Congress are drafting the Sustainable Transport Bill. With the support of an Earth-friendly senator who chairs the Senate Committee on Finance, a cost allocation was made for road-sharing exercises in the 2016 national budget of the Metro Manila Development Authority (MMDA).

This act of creative legislation holds bright promise. It will make government agencies duty-bound to implement road sharing, promote non-motorized transport and build people-friendly walkways and bike ways.[7]

With the recent change of government, however, initiatives taken a few months ago with a more awakened leadership are now beginning to languish in the sickbed of ignorance.

CEBU DAILY NEWS

Clooney marries lawyer

NEWS

NEWS

SPORTS

'WORTH TRYING'

Road sharing in Cebu City in central Perlas on Sept. 28, 2014. The one-day experiment was part of a private sector-led urban plan called the Green Loop. Proof of concept: It works but needs refinement.

Local

In my hometown of Sta. Fe. in Bantayan Island in central *Perlas*, children and youth volunteers, with the support of their local leaders, are taking a step forward.

They took over the roads and painted lane marks in the middle of the streets.

One summer day on April 22, 2016, an even more daring legal action took place. Using a little-known law that says that 100 voters of a town can directly propose a local ordinance, the children took action.

In the morning of Earth Day, a group of children, local officials and ordinary citizens, accompanied by a live percussion band, went to the municipal hall to file their petition to compel local authorities to share the road.

The petition was signed by more than 600 voters and 1,200 children, backed by two dozen lawyers. They proposed an ordinance to divide the roads of the town by half – half for motor vehicles and half for people to walk and bike.[8]

The local council started hearings on the petition. Of course there were objections. Some came from tricycle drivers and local officials. But the wheels of the legal petition have been set in motion.

Will We Succeed?

The Road Sharing Movement is up against powerful vested interests – car manufacturers and dealers, the oil industry, road builders, corrupt politicians and political leaders who are stuck in the belief that the ultimate good is to build more roads and that economic progress is symbolized by owning a car.

Local youths paint lane marks to divide the roads for road sharing in Sta. Fe town, Bantayan during Earth Day.

But the most difficult adversary is not the politicians who come and go, not the car manufacturers and wealthy government contractors who rise and fall, as do even empires. The most challenging adversary is the mind-set that desires the glamour of cars.

What are roads for? For whom are roads built? We have to return to the common sense goal of roads and of transportation as a means of moving people.

The car-centered mind-set of society is the source of much of today's urban maladies. People cooped up in speeding steel boxes (cars) are transformed into rude, self-centered and even violent creatures. That is what we see in 'road rage.'

Roads can be a positive catalyst. By changing the road system, people can be kinder, gentler, more cooperative and more generous. When roads are shared and become public spaces instead of exclusive lanes for private cars, people are able to interact. They once again see each other as human beings instead of metal boxes in motion.

Yes, we need to transform the road system

and the way we think of roads and space. We need to shift the focus from motor vehicles back to the people.

Will we be able to unlock the traffic Gordian knot that plagues cities that desperately copy the lifestyles of the rich and lazy promoted in advertisements and movies?

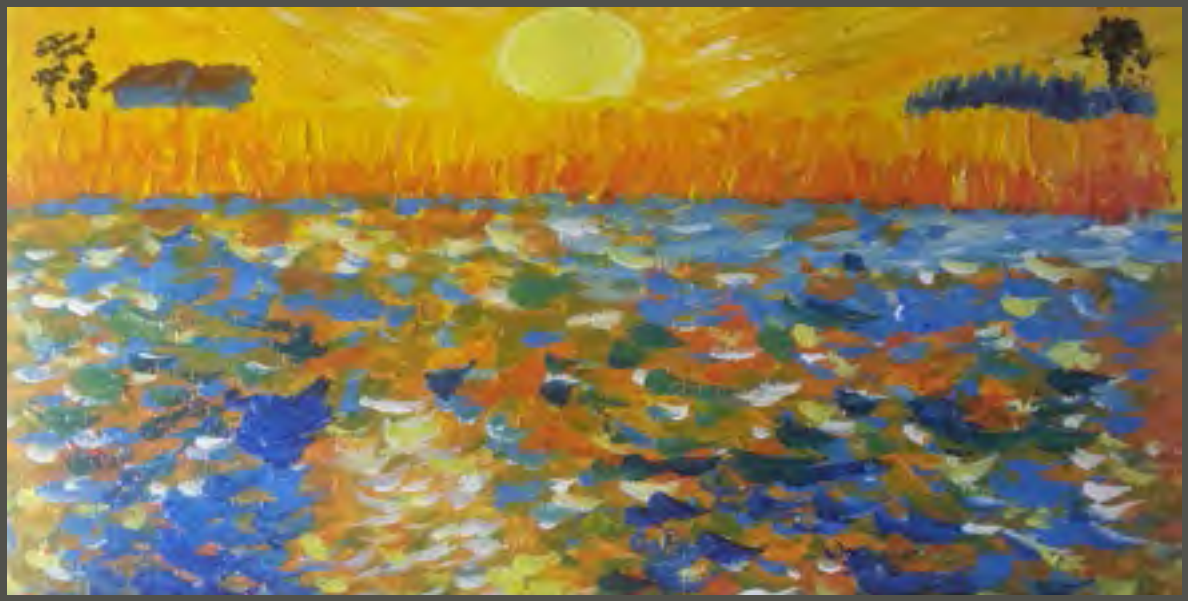
We may not see it in our lifetimes or maybe in the next ten lifetimes. A revolution cannot and must not happen overnight. It counts on ordinary citizens and enlightened policy-makers and doers to take bold steps forward.

Pedestrian road in Malaga, Spain

It is all up to you whether you want to share the road or suffer the status quo of traffic jams, air pollution, mean streets and meaner men.

But plant a seed of ideas we must. If it falls on good soil, maybe it will sprout and one day become a tree to give shade and fruit. May the shade be wide and the fruits many.

In the stories shared in this book, a setback often turned out to be a step forward in disguise. Sometimes, after working so hard and meeting only fantastic failure, all of a sudden, without lifting a finger, the pieces fall into place.

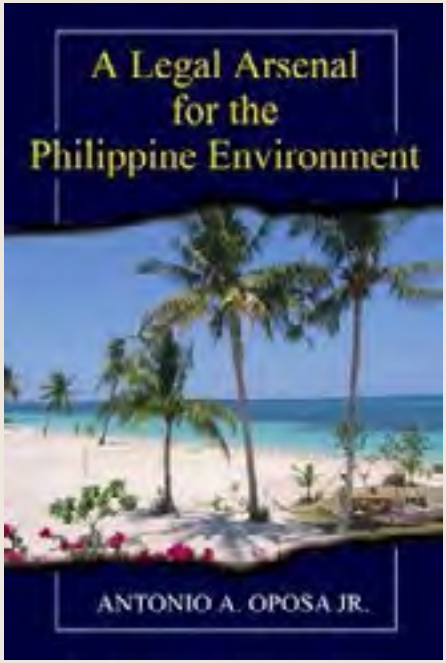


But through it all,
we must always have fun,
and grin at both success and failure.
Those 'two faces of the same impostor,'
ever ready to eat humble pie
when the tears of defeat wet our eye.

But through it all, we must always
stop for friendship and for
the scent of a flower.
And in voices loud with power,
howl at the ceiling
for the sheer pleasure of living.

13.3 Legal Marketing

The chronic challenge of Environmental Law is its implementation and enforcement. I have spent an entire career trying to enforce the law. I also compiled all the environmental laws of my country in a 1,400-page book. In the end, I was appalled that not even one percent of these laws were being implemented.



In the rare times that we have been successful, we only minimized the destruction of a resource or blocked something that would have been catastrophic. Rarely was there success in punishing the guilty. All the gains have been achieved at great cost of life and limb to those who seek to enforce the Law.

After all the wounds and scars of battle, I realized that:

a. Individually and collectively, we have achieved very little. Despite all the laws, the problems of the Earth have grown from worse to worst.

b. The best form of law enforcement happens

when there is general compliance. To generate compliance, Law must be treated as a marketing exercise. While ordinary marketing sells a product, Law sells a mode of conduct.

If Law is a marketing exercise, then we must use the Five P's in the Art of Marketing – Product, People, Place, Promotion and Price.

Let us try this out in the solid waste management law.

1. **Product** – What we are trying to market is the social good of cleanliness, reduction of waste, and a wholesome and livable environment.

2. **People** – Who is the primary target market? That would be community leaders, housewives and schoolchildren. Once the target market is identified, efforts to reach out to them in creative ways must be explored.

3. **Place** – Where will the product be tested? It can start as a pilot project in a locality where the inputs and outcome can be monitored by a village or a cluster of villages. When it works there, it can be rolled out and scaled up to a larger area.

4. **Promotion** – Strategy is needed to encourage voluntary and general compliance, and to spread awareness of its goals and benefits.

5. **Price** – The effort to comply with the Law or its 'cost' must be kept low, i.e., the Law must be easy to comply with. It also refers to the cost of not complying with the Law. This must be very high.

   If the Law must be enforced at all, it must be done in a manner that is swift for certainty, painful for memory and public for deterrence.

'Kind words do not just praise the goodness of others. Kind words have the power to change the destiny of a nation.'

- Dogen, Zen Master

Human Hunger

Law punishes bad behavior. But what promotes good behavior? It is not the Law; it is human psychology.

The greatest hunger of humankind is not for food; it is the hunger for appreciation. There is so much good happening in this world by men, women and children from all walks of life, ordinary citizens and government employees alike.

Yet what do we hear in the news? Mostly about the bad things. The mass media usually report the killings, the rapes, corruption, controversy and the vilest acts of human beings. Bad news sells.

Remember what we said about paper money? All currencies of the world are of such size that when you cover your eyes with it, you see nothing else.

Recognition Program

What if we had a recognition program to identify, appreciate, recognize and commend good environmental behavior? This could be done with partners in government and in the private sector.

Take the case of Government. There is an all-powerful agency in *Perlas* that strikes fear in government personnel – The Office of the Ombudsman. It has the power to investigate, suspend, terminate, forfeit retirement benefits and prosecute government personnel for graft, corruption or gross negligence in the performance of public duty. When a government employee receives a memo with the letterhead of the Office of the Ombudsman, he will almost fall off his chair, suffer serious anxiety and lose sleep.

What if we use this 'power of the stationery' to recognize and commend good behavior of government employees? Instead of falling in fear, wouldn't the heart of the recipient of the letter leap to high heavens with the rocket fuel of joy? He or she would immediately share it on social media, tell relatives, friends and officemates, and thus serve as a shining example of a good government employee. What if the letter of recognition and commendation is co-signed by the Office of the President, Secretary of the Department of Environment, and a couple of prestigious local and interna-

tional nongovernment organizations? Would that not add to the recipient's pride, honor and joy?

This would have powerful and happy side effects.

First, the one who receives the commendation letter will feel so honored that he will do everything in his power to deserve it and will be motivated to do even better.

Second, other people in his circle will be inspired to do their best as well. If good behavior will be recognized, there is hope that the innate hunger for appreciation will be satisfied.

Third, the positive energy created by many commendation letters will generate a tidal wave that drowns out the negativity of mass media. In its place, a new world is born, one where more good acts are recognized and repeated. It will serve as an exponential multiplier of goodness.

Once a year, a major awarding ceremony can be held in City Halls or Provincial/State Capitols for local awardees. National awards for truly outstanding achievers can be held in the Presidential Palace or another prestigious venue.

Seeds of Hope

A plan like this is already in place. Last October 2016, a group of men and women in *Perlas* discussed the basic mechanics of such a program. A full-time secretariat from the private sector will be set up. The private character will insulate the movement from the fickle winds of government and petty partisan politics.

Politicians and government officials come and go. A sustained program is possible only when

the people who lead it are truly committed to the cause with a long-term view. Government agencies are welcome to join. Again, one recurring and often expensive lesson I have learned is never to rely on government to do the right thing in a sustained manner.

What do we recognize? Initially we agreed to spotlight good deeds in:

1. Solid waste management
2. Innovative marine conservation
3. Coastal governance
4. Road sharing
5. Edible landscaping and rain gardens
6. Eco-governance
7. Environmental legislation
8. Environment education
9. Arts for the earth
10. Environmental jurisprudence
11. River restoration
12. Youth affairs
13. Women empowerment
14. Lifetime achievement

That is just for starters. To add prestige, the awards can be named after people who have made truly distinguished contributions in each field.

If anyone is willing to help carry this out, feel free to get in touch with me directly. The only thing I can assure you is that it will not take long before the wave of positive energy will replace the negativity we feel in the world today.

Other countries can adapt this program to local conditions in their own way and style. The positive energy will unleash the native genius of the human heart. What is important is the over-arching principle: To recognize and appreciate good environmental conduct. This can be later replicated in other sectors, e.g., anti-corruption, women empowerment, health, etc.

By doing this, my dear friends, together we will be planting many seeds.

To paraphrase Confucius:

To plan for a year, plant rice.
To plan for ten years,
plant a tree.
To plan for a thousand years,
In the hearts of every man,
woman and child,
Plant the seeds of hope.

14
CLIMATE JUSTICE FOR FUTURE GENERATIONS

What is 'justice'? Justice is giving everyone what they deserve.

Do the future generations deserve the Earth and the climate we are leaving them?

If they do not, what can we do about it today?

The list is long, and time is short, very short.

Climate Crisis

The Earth has a high fever. The symptoms are the clear and present dangers of extreme weather events, super typhoons, forest fires, droughts, flooding, rising sea levels, storm surges, an acidic sea and more.

Yes, the Earth's fever is rising and is reaching a state of convulsion and delirium.

Mind Shift Moment

In the evening of December 12, 2015, almost 200 countries finally agreed that:

1. The climate is in crisis.
2. The cause is the excessive burning by pyromaniac humans.
3. The time for talk is over.

It took an entire generation for supposedly wise humans to accept the truth and decide to take action.

In the Paris Agreement, nations agreed to try to keep the Earth's fever from rising too high, somewhere between 1.5 to 2.0 degrees Celsius. The human body has an average temperature of 37 degrees Celsius. Imagine a fever permanently rising to 39 degrees. What happens to the body?

At best, the Paris Agreement is an aspiration, an almost impossible dream. How the world will get there, a world severely infected by the virus of consumption, is unclear and remains a great challenge.

What is certain is that this future will not happen by itself. Nor will it happen because of the good graces of governments. By definition, governments and political leaders are shortsighted and fickle. Shortsighted because almost all elected leaders look ahead at only 1,000 to 2,000 days of their terms in office and then focus on how to win the next election. Fickle because the next person who assumes office, especially if he comes from the opposing camp, will most likely reject the work of the past official and start all over again.

Long-term concerns can only be addressed by committed and collective actions of those who dare to care. That's us – the people whose lives and well-being are at stake. This is especially true for the young of today who will suffer the full impact of the climate crisis. We will make it happen!

Think Global, Act Local

Sure, change must happen. But real change must begin in each of us— every man, woman and child.

Simple changes in personal behavior like turning off lights, gadgets and appliances when not in use, not wasting water, being

mindful of what we buy, what we throw away and what we eat.

These actions may seem small. But by doing that, we will experience firsthand what the world needs to do – become less wasteful. By doing that, we become living examples of the 'change that we seek to see in the world.' We can stop bellyaching about the problem and start becoming the solution.

When change happens inside, then we are ready to change the world outside.

Outer Changes

Three movements for outer change can spark a series of actions leading to the end-goal of the change that we seek.

1. Road Sharing
2. Edible Landscaping and Rain Gardens
3. Inter-generational Climate Justice (ICJ) Movement

DISCUSSION

Road Sharing

We saw earlier how the motor vehicle in its entire life cycle is the cause of more than half of all heat-causing gases released into the air. The Road Sharing Movement has two objectives:

1. To improve public transportation, reduce the burning of gasoline by the motorized monsters running amuck in the roads and thus clean the air; and

2. Provide spaces for people to walk, bike and grow edible gardens.

Edible Landscapes and Rain Gardens

Communities, especially urban centers, need more greenery for a better quality of life.

Edible landscapes and rain gardens will dissolve the problem of food hunger and flooding. Added benefits include cooling the air, restoring social interaction, the capture of carbon dioxide by plants and reducing the carbon footprint of the transport of produce from farm to family.

ICJ Movement

Inter-generational Climate Justice (ICJ) confronts the question of whether we are doing justice to future generations with the Earth that we leave behind.

ICJ also means the Inter-national Courts of Justice. These are the courts of law where the question on inter-generational climate justice is being raised by the young, representing themselves and future generations. The hyphenated word 'inter-national' is deliberate because it refers to both national and international courts and tribunals.

The ICJ Movement is a movement of citizens and lawyers around the world who are using the law as their tool for social change.

This Movement seeks to:

1. Stir up global cooperation, especially among the youth, to prod and support strong and sustained actions to address the climate crisis; and

2. Impress upon short-term governments their long-term duties to protect humankind from worsening climate-caused disasters.

The movement is not an organization, a project or a funded program. It is a spontaneous combustion of actions of ordinary people – by grown-ups who care for their children and of children who care for their future.

More importantly, it is a movement of people around the world connected by a shared passion, who care … and dare.

Legal actions in courts and tribunals have already been started in the Netherlands, Pakistan, the Philippines, Peru, Norway, Sweden and in the U.S. states of Washington and Oregon. In October 2016, 450 women in Switzerland aged 65 and above started a series of legal actions against the Government to compel authorities to take action on the climate crisis.

A storytelling and listening tour on climate justice for future generations can be held in all UN regions of the world -- Aftrica, Latin America/Caribbean, Eastern Europe, Asia Pacific, Western Europe, North America and Australia.

and to take action. We will see more of this in the coming months and years.

Legal actions generally take two tracks. One is to hold parties responsible for past actions. The other is to compel present and future actions.

Many of such actions are happening in the local courts. But there is a more ambitious (and fun) plan to bring legal action before the highest court of the world – the International Court of Justice (ICJ).

The idea is to ask the World Court for an advisory opinion on the question:

> "Under International Law, what are the duties of States to protect humankind of the present and future generations from the climate crisis?"

This request for an advisory opinion from the ICJ is an innovative approach to use the Court to address the climate crisis. The question is framed to:

- Be non-adversarial against any state.
- Not look to the past nor imply liability or responsibility for past actions of any state party. Instead, it looks to duties of the future. These duties are inherent in the role of States as the *bonus pater familia* not only to its own people and to people of other States but to humankind in general.
- Compel all States, whose temporal powers are held by short-term governments, to look far into the future. Human beings by nature are hard-wired to think only of the present. We all need to see the impact of present actions on our children, grandchildren and next generations.

The UN General Assembly will be asked to consider this question: Do the youth of today and future generations deserve the climate and the Earth we are leaving behind?

THE PROCESS

Seeking an advisory opinion in the World Court is a two-step process.

1. Resolution of the UN General Assembly

A country or group of countries must initiate a resolution in the UN General Assembly to seek an advisory opinion of the World Court. The resolution has to be approved by a majority of the member countries.

Here the fun begins.

This step will be a reason to invite the youth of the world and others concerned to petition their own governments and UN Ambassadors to support the proposed resolution.

For a global campaign, public hearings can be held in various countries similar to that conducted by the Brundtland Commission in 1987. This would include a listening tour to draw out stories of how the climate crisis is affecting different parts of the world, what citizens are doing about it and what we all can do together.

Hands-on activities for road sharing and edible rain gardens will provide people, who are overwhelmed by the immense challenge of the climate crisis, direct experience with change agents that will have an enormous impact.

2. Referral to the ICJ

Once the UN Resolution is approved, the matter is forwarded to the ICJ based in The Hague (Netherlands) for deliberation. The World Court then invites all the State Parties of the UN to submit written comments.

Here another phase of the fun begins. Youth groups and other concerned citizens, in their own countries, can put gentle pressure on their governments to submit plans for sustained actions to face the climate crisis. The crisis is already here. Humankind must address it through mitigation and adaptation measures.

Many of these plans are contained in the Nationally Determined Commitments (NDCs) which nations submitted to the UN Climate Change Secretariat. Some are strong, some are weak. But if, and that is a big if, these NDCs

are complied with, the Earth's climate is still heating up by almost 3 degrees. Again, imagine if the human body with a normal temperature of 37 degrees Celsius would permanently rise to 40 degrees.

The word 'if' is a big one. Government plans are pipe dreams that remain on paper unless there is a strong impetus to make them happen. That force can only come from the sovereign power – the People, especially those who have the most at stake – the young. This is their game.
The question to be raised before the ICJ is very simple, almost common sense.

The same philosophical question, framed in different ways, about the legacy left for future generations, is being raised in different nations. But the simplest question can be a thunderbolt whose electric charge will be felt around the globe.

In Summary

Together, we will roam the world to ask basic questions:

1. Do future generations deserve the Earth we are leaving behind?

2. What must we do – especially governments who stand as good parents of the family of man – to protect present and future generations from the climate crisis?

If you want to be heard,
tell a story.
If you want to touch
the heart,
sing a song.
If you want to
start a revolution,
Ask a question.

A fisherman paddles past mangroves in the Tañon Strait in Cebu

DECLARATION OF COMMITMENT

I, _____, resident of one Earth, citizen of _____,
with address at _____ hereby declare:

I believe that the climate crisis is the greatest threat to humankind and to other life-forms on Earth.

I know that we, human beings, supposedly the wisest creatures on Earth, are the principal cause of this problem. I also know that we must be the solution.

As a responsible human being, I commit myself to take actions of enlightened citizenship to be part of the solution.

For this purpose, I will take personal actions and do my share to reduce the damage that humankind is inflicting on the Life-Sources of the Earth – the Land, the Air, and the Waters.

Only by doing so will I have the credibility and the moral authority to seek change from others.

I will then join the International Climate Justice for Future Generations Movement of ordinary citizens. Together we will call on others and on our leaders to take strong, serious and sustained action to address the global climate crisis.

E-mail: _____

_____

_____

_____

_____

Signature and Date

PERSONAL ACTION

I, _____ , hereby commit to:

(Please check at least 5 items.)

- ☐ Turn off lights, gadgets, and appliances when not in use.
- ☐ Reduce waste of materials and energy. Ensure that my used materials will be recycled whenever possible.
- ☐ Promote efficient public transportation and non-motorized transportation systems. I will walk or bike if I can, and minimize my use of cars.
- ☐ Reduce or eliminate my consumption of animal products, especially red meat.
- ☐ Compost my biodegradable wastes.
- ☐ Plant and care for a vegetable, flower, or tree.
- ☐ Nurture other living creatures.
- ☐ Avoid mindless consumerism by reducing my purchase of material things.
- ☐ Extend the use of my things as much as possible.
- ☐ Avoid the use of disposable plates, utensils, glasses, and plastic bags.
- ☐ Conserve water whenever possible (e.g., using a glass of water when brushing teeth, take shorter showers, report leaking faucets, etc.).
- ☐ Purchase locally grown and raised produce and products, whenever possible.
- ☐ Others _____

To quality for membership in the International Climate Justice for Future Generations movement, we would appreciate you taking at least 5 personal actions. We must be the change that we seek!

15 EARTH, HEART & ART

To protect the Earth,
we must use the Heart.
Not the mind.
But how?

There is a clue
in the words 'Earth' and 'Heart.'
Both words contain the word
Art.

Science and law speak to the mind
and give the direction.
Art speaks to the heart
and sparks the fire of passion.

When you change the mind,
it can change tomorrow.
When you change the heart,
it is forever.

Art for the Earth

To test this, on April 22, 2016, the **Art Center for the Earth** was put up in the white sand shores of Bantayan Island in the central seas of *Perlas.*

It is our hope that the modest beginnings of the Center will one day blossom as a venue and melting pot of artists.

It will also be a hall envisioned for the performing arts, a library, a room for an artist-in-residence and an office with a view of this …

Tonight, My Dear

Tonight, my dear,
I shall dream of you
Tonight, my dear,
I shall pretend
That you and I
On the seashore lie,
To peer into the heavens
And at those pinpricks of light
They call the stars.

Tonight, my dear,
I shall talk to you,
In a language that only
The passion of fire
And the fervor of faith
Shall ever understand.

Tonight, my dear,
I shall sing you a song,
A song that from the soul springs forth,
A song whose words
Need not be written;
Whose melody need not be set in rhyme.

Tonight, my dear,
I shall whisper to you a song,
A silent song that
Only you can hear.

Tonight, my dear,
I shall thank you.
For like the rays of the morning sun,
Coupling with droplets of rain,
You have given life once again,
Life to a wilting flower,
Long deafened,
Long deadened,
By the ticking
And the tocking of the hour.

Tonight, my dear,
If you please,
If you wish,

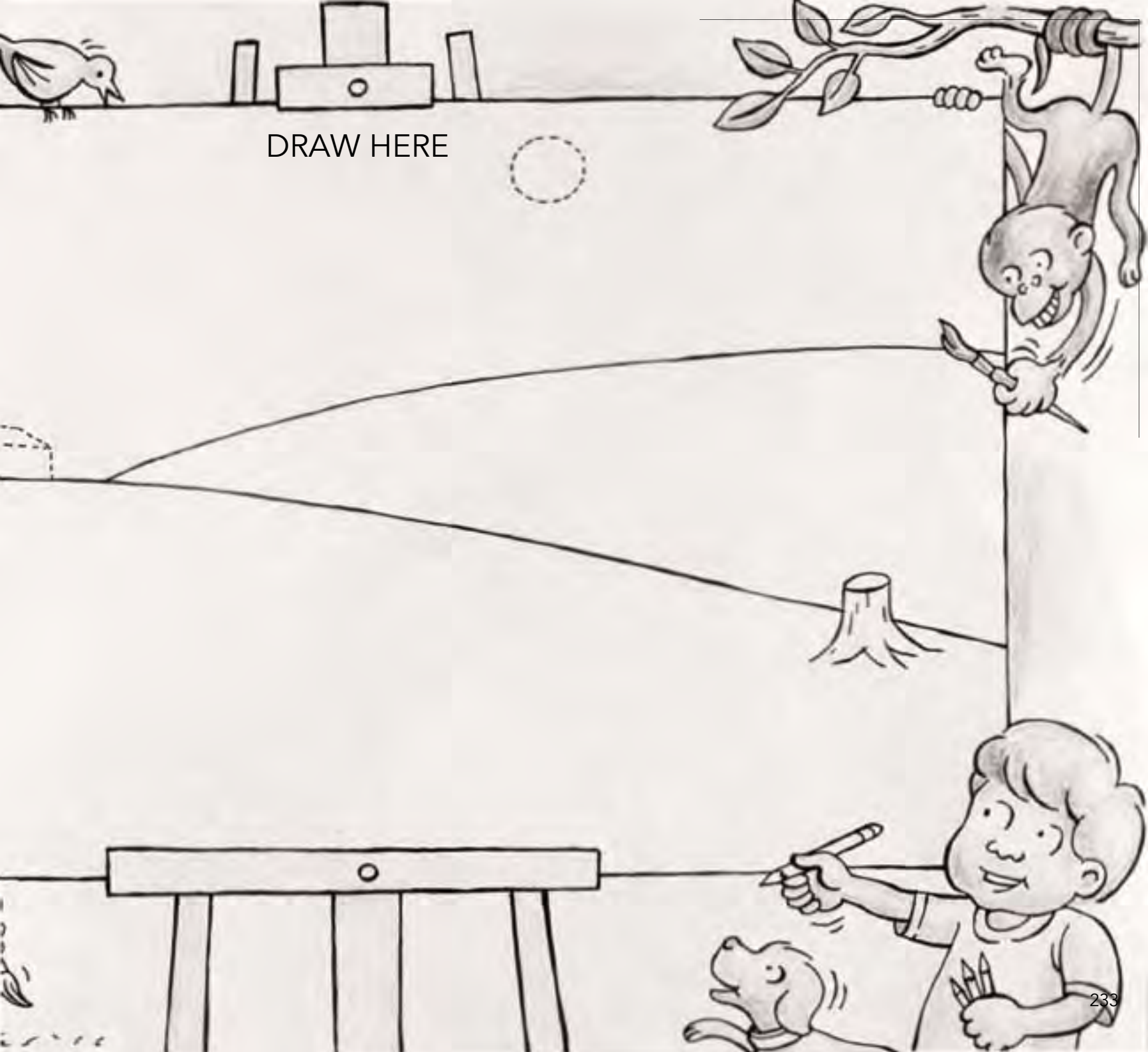
I shall love you.

16 PAINTING OUR FUTURE

For the last hour or so
I have taken you for a walk.
Now it is your turn
to tell us your story
of what you want
the world to be.

'What you can do
or dream you can,
begin it.
Boldness has genius,
power and magic in it.'

- Johann Wolfgang von Goethe


DRAW HERE

There is no limit
To what we can achieve
When we unleash
The native genius of
The Human Heart.

00'13

From My Inmost Heart of Hearts

This story and picture book is like a painting. It is the product of hundreds of painters, stroke by stroke, with layers upon layers of human thought and experience.

Some of these people I have not met. But the outlines that they drew on cave walls inspired me to think differently. I began to shift my thoughts from the present state of destructive economics to one where we nurture the LAW of Life. After all, are we humans not the wisest animals on Earth?

E.F. Schumacher sketched a new economic thinking in his seminal book *Small is Beautiful*. There was David Brower and his ideas on conservation, protection and restoration (CPR); Lester Brown and his *State of the World* books with stories of turn-arounds from destruction to restoration; Abraham Maslow and his hierarchy of needs; Mohandas Gandhi on the power of non-violence and the value of simple living. They are my heroes, although no longer with us.

In this life, I have met Gus Speth, and my spirit brothers Nick Robinson and Durwood Zaelke. Gus Speth is a living legend. I was so happy to read of his ideas on new economics. It somehow assured me that I am not as dumb as I look.

I had the good fortune of being cared for by two sets of parents – my grandparents, with whom I grew up, and my biological parents. From my grandfather Canuto (Papa Oto) I learned the values of thrift and simple living. From my grandmother Rosario (Mama Ing) Codilla, I learned to appreciate the generosity of Nature. From my father, Antonio (Tonying) Oposa, the great surgeon, I received jolly genes, a happy view of life and an attitude of gratitude. I owe him my life in at least three ways – the gift of birth, and the gift of healing for two serious health episodes. From my mother, Clarita (Claring) Velhagen Asuncion, I received the gift of nurturing Life through the life of plants.

A special note of thanks to Durwood for inspiring me to take on the title. In May 2012, four of us were in my beach house in Bantayan Island — Romina Picolotti, the youngest Environment Secretary of Argentina, and our dear friend Mike Frizzell, former marine and Vietnam combat veteran. We turned off the lights at night and went to the beach to watch the stars.

We sat on the seashore listening to the waves. At high tide, beaming a flashlight on the water, we watched fish leap out in different shapes, forms and different directions. Durwood casually mentioned that this nightly treat is what we see in the School of the SEA — shooting stars and dancing fish.

Thank you to the Vermont Law School and to the Pace (now Haub) Law School. In Vermont, may I thank Melissa Scanlan, Stephanie Farrior, Gus Speth, Pat Parenteau and the students, among them Samantha Ruiz, Jon Hernandez, and my friends Steve and Janet Anderson, Merideth Wright and many more for their hospitality and friendship.

In Pace Law School, we rekindled ties with Dick Ottinger, Nick Robinson, Bobby Kennedy Jr. and Karl Coplan, and made wonderful new friends like Victor Tafur, Jason Czarneski, Felipe Dias, Oscar Zenteno, Chelsea Hebert, Kelly Nishikawa, Laura Jensen and many more. Kelly helped so much in the research of CPR stories around the world.

Without the space and quiet time they gave for cloister, this book would have remained a seed.

A sincere thank you to Eric Yamamoto and David Forman, and the University of Hawaii (UH) for the rare chance to teach there in the Spring of 2015. There I carved out time to refine the thinking for this book. In Hawaii, I met dozens of wonderful people like Denise Antolini, Mike Wilson, Peter Arnade, Avi Soifer, Spencer Kimura, Clifton Tanabe, Philip Tumbaga, Khara Carolus, Belinda Aquino and the Fil-Am Community, Keani Rawlins, Malia Atukagawa and Maxine Burkett.

Some occupy high positions in the academe or elsewhere. But to me, each one of them occupies the highest position … in my heart.

Journal of a Journey

This book is a journal of my journey in Environmental Law, a practice that did not exist when

I started in my home country. It would not have been possible without the guidance of two of my law professors, mentors and dearest friends, Myrna Feliciano and Leo Quisumbing. They opened the doors for me to the world of Environmental Law, assuring me that I was not on a fool's errand. Although I was a lawyer by profession, at heart I was (and am) really a beach bum. I care deeply about the sea, the fish and the trees, all of whom do not pay attorney's fees.

The country owes a favor to the Father of Environmental Law in the Philippines, Amado (Ding) Tolentino. In the 1970s, Ding met Parvez Hassan of Pakistan. Under the mentorship of Wolfgang Burhenne, they drew up the outlines of Environmental Law for the world. As Director of the National Environmental Protection Commission (NEPC), Ding published the first books that compiled the country's Environmental Laws.

Special mention goes to Ma'am Myrna Feliciano who guided me in every critical twist and turn of my roller-coaster career. She was one of the few lawyers who supported my decision to file the petition on the Children's Case against illegal logging. In the late 1980s, she invited me to co-author with her, Ding Tolentino and Wally Gloria the 1992 book *Environmental Law in the Philippines*.

When I was on the ropes in the Children's Case, Ma'am Myrna introduced me to Eric Jensen of The Asia Foundation. It was Eric who invited me to my first International Environmental Law Conference in Hong Kong in 1991. It was organized by the American Bar Association.

There I met Dinah Bear, then General Counsel of the U.S. President's Council for Environmental Quality (PCEQ). She told me about a book by law professor Edith Brown-Weiss from Georgetown University Law School. *In Fairness to Future Generations* introduced the concept of 'Inter-generational Responsibility,' a term I could hardly pronounce. Dinah said this was the theory of what I was doing in practice. This gave my work a more intelligent and sophisticated name from someone more credible than a 35-year-old wild-eyed lawyer. It was later in 1997 when I got to meet Professor Brown-Weiss.

In that conference I met friends who would later rise to great heights – Michele Corashk; Brian Preston, now Chief Justice of the Land and Environment Court of New South Wales; Ben Boer, Deputy Chair of the World Commission on Environmental Law and Professor Emeritus of the University of Sydney; Mas Achmad Santosa, founder of the Indonesian Center for Environmental Law ICEL; and John Boyd.

In the Children's Case (Minors Oposa vs Factoran), two young lawyers, fresh out of law school, provided moral support. Jig Corpuz was my legal assistant and the other, Ipat Luna, went on to make significant contributions in Environmental Law and serve as Undersecretary of the Department of Environment and Natural Resources (DENR).

The Children's Case was a 'No-Thing,' a product of my being hardheaded about bringing it all the way to the Supreme Court to make a point. I wanted government offices to see that children and future generations were real parties-in-interest. If we wiped out all the forests today, my children (and the children of my friends and relatives) and the generations yet to come would suffer irreversible loss.

It was a great stroke of fortune that the case landed on the desk of a man who is deeply connected to Nature, Hilario Davide Jr., who later became Chief Justice. The man grows his own vegetables in a garden at home.

In this book, I share stories of my adventures and misadventures. May I take this chance to acknowledge the gift of friendship and cooperation that I have been blessed with throughout this journey.

Illegal Logging

My earliest foray into hands-on law enforcement work was in the early 1990s. I had a small job with the World Bank to conduct law enforcement training for judges, law enforcers, environment agencies, etc.

I went the extra mile and used contacts made during these seminars in different regions to begin striking the blow of serious law enforcement against commercial illegal logging. Illegal logging was done with impunity. It went on directly through operators or under the protection of public officials, police and even the military.

It was during the term of Environment Secretary Angel C. Alcala (1992 to 1995) that the first coordinated and no-nonsense crackdown on commercial illegal logging began. This did not end the problem, but it was a catalyst that sparked a series of other actions that finally led to a logging ban in the country 20 years later. Alcala also created a marine conservation office in the DENR. Congratulations, Doc ACA. In your time, while gifted with privilege and position, you started the sea change.

In this adventure I met men like Jun Gana, Mon Esguerra and Rey Lugtu (Department of Justice); Oscar Embido and Ludgi de Lemos (National Bureau of Investigation); Nards Paat (DENR); Juanito Bernad (Supreme Court); and Dangal de Leon (Office of the Solicitor General). Special mention and prayers go to Leonardo Tindoc, one of our witnesses in the illegal logging campaign and cases. To silence him, he was murdered in front of his house. He was one of the first victims of extrajudicial killings (EJK) of environment advocates.

Friends of Shared Passions

The author CS Lewis defines friendship as 'people of shared passions.' In my journeys using the Law of Nature as my weapon of choice and human law as the spark plug of action, I have met wonderful people.

In my early days of planting trees in the mountain villages of Cebu City (circa 1983-1988), Rene de Rueda, then DENR Assistant Secretary for the Visayas, opened doors for the environmental movement in Cebu to see the light of day.

I had the chance to work with Boy Montejo, Vivian Batayola, Inting Calizar, Jerry Dolino, Nards Sibbaluca, Nanding Alberca, Ebert Bautista, Jun Factoran, Celso Roque, Nards Paat, Delfin Ganapin (both father and son), Ted Pison, Vic Ramos, Mon Paje, Bebet Gozun and Ben Malayang.

When I moved to Manila in 1988, only a handful of young lawyers were practicing in the unknown field of Environmental Law. There was Ding Tolentino and members of a newly formed legal arm of the Haribon Foundation called Tanggol Kalikasan. The title of 'mother' of Philippine Environmental Law is deserved by our dearest law professor, Myrna Feliciano of the University of the Philippines.

Visayan Sea

When I started my sea adventures (ca. 2001), there were my dear friends Bombi Aznar, Dodong Pena, Rudy Estampador, Bernil Gastardo, Gary Cases, Nora Ross, Boy Amores, Dodoy Marabi, Jojo de la Victoria and many others who lent a hand. Together, at different stages of the sea voyage, we took two small outriggers and toured the Visayan Marine Triangle.

To raise awareness about the condition of the sea, we gave pictorial lectures and did community outreach work. In one of those seaborne legs to Refugio Island, a dream took hold that later became the School of the SEA (Sea and Earth Advocates).

Because of rampant illegal fishing that was going on, we decided to shift focus to law enforcement. Thus was born the strike force known as the Visayan Sea Squadron.

In this, I worked with sincere, committed and action-oriented public servants in the NBI and other agencies – Ludgi de Lemos, Ed Caratao, Ermie Monsanto, Greg Algoso, Arnel Pura, Rey Pono, Bert Pernito (Police) and Jun Abueg (Navy). I also had the chance to become the friend of Benny Magallanes, Emok Montibon, Hector Teodosio, Art Defensor, Raul Banias, Jett Rojas, Dodong Toledo, Wilmon Peñalosa, Alett Nunez and many more.

Manila Bay, Laguna Bay, Minolo Cove

Allow me to mention people who played a role in the legal dramas. In the Manila Bay Case, Vina Ilas was among my UP Law students who dared to act as plaintiff. There were Lucenito Tagle (the trial judge), the opposing counsel in the Office of the Solicitor General, and my co-counsels Sig Fortun and Beda Fajardo.

Moral support was given by people like Ave Cruz, Rudy Estampador, Romy Mabanta and Bobby Joseph. We needed to let the court smell the stink of Manila Bay. Ave Cruz and company helped us hold the first ocular inspection in an Environmental Law case in the Philippines. From the Manila Yacht Club – glamorous in name, but foul smelling – we took a boat ride with the judge and the opposing parties. Together we all saw the dying condition of Manila Bay.

I started out this journey alone. When my guru Nick Robinson knew of the case, he invited me to the Pace Law School in New York to attend the Water Keeper's conference, a group led by Bobby Kennedy Jr. It was heartwarming to see other people from another part of the world doing similar work to clean up the sea and waterways.

I was fortunate that the judge that tried the case, the Honorable Lucenito Tagle of the regional trial court, was sympathetic. After all, this case was nothing personal against any individual and well transcended their terms of offices. In the ten years the case was pending, the DENR had six Secretaries.

In the court hearings, I was lucky to get the help of my brother-in-law, seasoned trial lawyer Sig Fortun. He designated lawyer Flor Andres to handle day-to-day affairs of the case. In the Supreme Court hearing almost ten years later, I was joined by top-caliber lawyers Rolly Vinluan, Linda Jimeno, Rico Agcaoili and Karl Castillo. My spirit brother, the legendary MC Mehta of India, also helped explain to the Court the idea of a continuing mandamus.

Many thanks to Midas Marquez, Court Administrator of the Supreme Court and to Chief Justice Rey Puno and Justice Presbitero Velasco Jr. for their important roles in the Manila Bay clean-up case. It was during Chief Justice's Puno's term that the Rules of Court for Environmental Cases in the Philippines were passed. These rules contain watershed provisions on the Writ of *Kalikasan* (Nature), the Writ of Continuing Mandamus, waiver of filing fees, citizens' suits and anti-SLAPP suits. These have all become part of the law of the land. This was CJ Puno's handiwork of pure genius, using the rule-making power of the Supreme Court to open the doors of the judiciary for the redress of environmental grievances.

Much gratitude to all members of the Supreme Court who voted for the decision of the Children's Case and the Manila Bay Clean-Up Case. Several of them, including then Chief Justice Corona, Velasco and Mar Castillo, rode a coast guard vessel to see for themselves the condition of Manila Bay. Gratitude also to Francis Jardeleza for his early support for my work that made many things possible.

In the Minolo Cove case, I worked with Vicky Loanzon, a brilliant lawyer and environmental planner, and Cecilia Yulo-Locsin. Early on, Locsin started to protect a large chunk of Puerto Galera's beautiful coastline and mountains in the Province of Mindoro. God bless her for her vision and action.

In the Laguna Bay case, I worked with lawyers Abet Hidlago and Tess Oledan. Together we crafted and nudged an ecosystem approach for the management of Laguna de Bay.

In opposing the reclamation of Manila Bay, I had the chance to meet and work with Doris Magsaysay-Ho, Jun Palafox, Pitoy Moreno and other kindred spirits who tried to protect the remaining unhampered view of Manila Bay.

Bantayan Island, Imus River

In the case of Bantayan Island vs Easement Zone Violators, it was a privilege to see committed people in Government like Nards Sibbaluca, Nanding Cena, Inting Calizar, Horace Ramos, Jun Adobo,

Dodo Salazar, Gwen Garcia, Tamar Espinosa and others. The DENR's ad hoc demolition team removed structures by the sea for violating the easement law. Despite lack of proper equipment, they carried on. Dodo and Gwen had a few jackhammers handy, and kindly lent them. Ben Cabrido, a hardworking and brilliant lawyer, was my counsel of record.

Cleaning up part of the Imus River was fun, made even more exciting because I thought we could do things right. My father-in-law was then Governor of Cavite. In this endeavor I met great examples of sincere and committed human beings, among them Cesar Virata (the country's first and only prime minister), Johnny Remulla, Ayong Maliksi, Recto Cantimbuhan, Mon Resureccion and Mr. Ponce.

The experience was also my frustration in working in the political arena. This became the seed of the Manila Bay Case. Yes, political persons and governments are shortsighted, fickle and iffy. Maybe legal action can give a sense of continuity.

School of the SEA, Art Center for the Earth

And then there are ongoing projects where I am blessed to have friends taking the path with me.

In the School of the SEA, I value the support of my daughter Anna, Dodoy and Dita Marabi, Lot Villabrille, Bebe Gictenta, Joy Onozawa, Socorro Atega, Ace Durano, Lourdes Manulat, Cindy Pepito, Pereg Noynay, Martin Alfaro, Freddie Maranon, Doc Angel Alcala, Domi Chua, Bonar Laureto, Tata Morandarte, Ramon Tinga, Geralyn Escario, Erlinda Giducos, Vivienne Zerrudo, Winnie Pastor, Nilo Arribas, Panchito Puckett, Jurgenne Primavera, Ed Hagedorn, Rene Mercado, Boy Montejo, Jenny Franco and many others.

Their names are forever etched on the marble Wall of Honor in the School of the SEA in Bantayan.

One of the main parts of the school is the evolving Art Center for the Earth. It is envisioned to be a venue for budding artists – children and adults alike.

In this new phase, I am working with artists Fernando Sena, Golda King, Anya Lim, Teacher Emma Gutierrez, Adrian Rubio, Sir G Gonzalez, Junyee, Loren Legarda and many more. This is an evolving

dream to showcase the best of the Philippines and of the Filipinos through the medium in which they are so natural – the expression of beauty through Art. Art is the food of the Heart, as music is the language of the Soul.

Road Sharing Movement

In the *Bayanihan sa Daan* (Road Sharing) Movement, I've met great friends and fellow revolutionaries who believe we can turn around the car-fueled madness in the world today. They are Paulo Burro, Elen Basug, JL Contento, Karen and Rosar Crisostomo, Cora Jimenez, Danielle Guillen, Patrick Joson, Raquel Naciongayo, May Sangalang, Val Cruz, Grace Anastacio, Paulo Alcazaren, Tara Rama, Joy Onozawa, Maritoni Corominas, Randy Su, Kat Dematera, Glynda Bathan, Vicky Segovia, Brian Yuson, Clink Hagedorn, Mike Rama, Marc Canton, Rudy and Louella Alix, Buda Lebumfacil, Gene Tabada, Rene Mercado, Emerson Carlos, Tina Diaz, Bryan Montances, Wilmon Peñalosa, Tisoi Sy, Randy Yap, Rock Drilon, Jay Trenas, Edna Lee, Ron Sebastian, Romy Armamento, Nida Quibic, Neric Acosta, Marky Castaner, Mark Tinao, Robie Siy and his son Anthony Siy, GC (Mike) Kim, Alex Yague, Merva Arapo, Ian Cruz, Mark Tinao, Yeb Sano, Mario Montejo, Babes Singson, Frank Drilon, Jeb Mabilog, Noel Hechanova, Jonathan Bulos, Gerard Mosquera, Myles Teologio, Pia Cayetano, Karen Sarinas, Tess Trinidad, Franco Sarmiento, Cesar Sarmiento, Rachel Sibugan, Loren Legarda, Cynthia Villar and Julia Nebrija.

Edible Landscaping and Rain Gardens

In this effort to green the surroundings, I've had the chance to work with heart-and-mind people like Dodong Toledo, Babes Singson, Velenda Calimlim, Boyet Gawaran, Sammy Pacilan, Nong Jun Davide, the Yu family, Rubi Palafox and Dodoy Marabi. Given a little government support, the idea of edible landscaping and rain gardens will become a trend. With sustained effort, the culture of going back to the soil for our food will be ingrained in communities. We will become the models for the world.

Climate Justice for Future Generations

This wild idea of suing the whole world with the world "wanting to be sued" has turned into a non-adversarial but fun adventure to stir legal proceedings in the International Court of Justice (ICJ).

I've rekindled friendships and made new ones to advocate Climate Justice. Among these allies are

Antony Bartholemeuz, Frances Lawson, Philippe Sands, Farhana Yamin, Richard Harvey (UK), Romina Picolotti (Argentina), Rafael Asenjo (Chile), Antonio Benjamin (Brazil), Mike Gerrard, Nick Robinson, Paul Reichler, Carroll Muffett, Alyssa Johl, Karin Cicelski, Matt Pawa, Alix Contumaccio, John Bonine, Liz Brown, Julia Olson, Mary Wood (USA), Nicky Peart (South Africa), MC Mehta (India), Lye Lin Heng and Koh Kheng Lian (Singapore), Brian Preston, Justin Rose and Ben Boer (Australia), Kristin Casper (Canada), Asterio Takesy, Kandhi Eliesar, Andrew Yatilman, Tilson Kephas, Jun Baculando, Uncle Walter, David Forman, Denise Antolini, Mike Wilson (Pacific Island States) and Rida Derder (Morocco, Northern Africa).

The list is still growing. Yes, the time for talk is over.

The movement has been sidelined by a recent health episode of one of the key players. This needs someone with the energy, the heart and the imagination to make it happen. Calling for volunteers!

Book Writing

In 1998, the decision to quit my commercial law practice and write two books was a foolish leap of faith. I made sure my family had something to eat, but professionally I was broke. I moved to a new office near my house and went to work on *A Legal Arsenal for the Philippine Environment* and *The Laws of Nature and Other Stories.*

In Bantayan where I invited longtime friend Maning Go to our home, I told him of my decision to give up a law practice to finish writing my books. When he learned that I couldn't afford to pay for a research assistant, he promised to help. Maning introduced me to the Ramon Aboitiz Foundation (RAFI). And so both books got finished. Special thanks to John Boyd, Narsing Alfaro, Cindy Cabote, George Tapan and Sonny Alvarez in this project.

And thank you, *Bai* Maning, for opening many doors.

When it was time to get my work published, I could not find a publisher who would agree to waive copyright of the books and allow people to photocopy any of its content. I believe that knowledge, like love, are the only 'commodities' that increase in value when shared. Again, I was stumped without resources. (I did not want to ask RAFI for more help.)

Luckily, I inherited a piece of land in Ormoc City from my grandmother, Mama Ing. The property sale came just in time. I decided to spend the proceeds for publication of the books, a good idea.

Both books finally saw print in 2002 and 2003. The mistake, however, was to give away many copies for free. I realized that when things are given away for free (like Air and Water), people don't give them much value and tend to waste them.

Like any misstep, this was a step in the right direction … for next time.

I recovered a fraction of what I had spent for the books. As taught by Papa Oto, what is important is not how much you earn, but how much you save, and how well you use what you have. So, I decided to use all the book proceeds to set up the marine sanctuary in front of the School of the SEA.

It is not immodest to say that this marine sanctuary is one of the best-protected marine areas in the Visayan Sea. It is to the credit of my brother marine mammal and buddy Dodoy Marabi, who guards over the sea with eagle eyes and a daring heart 24/7. We have since called it the Jojo de la Victoria Marine Sanctuary in honor of our fallen comrade.

Writing

Many people have inspired me in the art of writing. Among them was my early high school teacher Nerissa Camins who believed I could write. (Me, write? In high school, I received the lowest conduct grade ever given in the school's history).

In the UP College of Law, Professor Ruben F. Balane was a genius. His knowledge of Civil Law was surpassed only by his knowledge of and love for Literature and Philosophy. A very special mention for my dearest professor Flery Romero. As then Director of the UP Law Center, she wrote to me, a mere student, a letter of congratulations and thanks for organizing my fellow law students to plant the seven Talisay trees that now adorn the Center. That showed me the power of good words to light up the candle of courage and inspired me to pursue it with the Pasalamat sa Katauhan movement. And there were my fun classmates Dennis Mesina, the natural born philosopher, and Cesar David, the natural born lawyer, who introduced me to good books.

People like Durwood Zaelke, Nick Robinson, Philippe Sands, Gus Speth, Oliver Houck, Cliff Villa and Lye Lin Heng, who are lawyers and authors, have inspired me to continue writing.

This Book

The Ramon Aboitiz Foundation Inc. has become a partner in the vision of the School of the SEA. Several years ago, RAFI generously offered to help 'institutionalize' the school. I am probably the only grantee of RAFI who returned grant funds.

Since then, we have become close partners in many endeavors. This book is one of them. Thank you, Don Ramon Aboitiz, for the vision of putting up the foundation 50 years ago. And thank you to your worthy successor, Bobby Aboitiz. With Bobby and his team, who share your vision – Domi Chua, Evelyn Castro, Ron Calumpang, Rianne Tecson, Carol Ballesteros, Rochie Glico, Ama-ya Aboitiz, Anton Dignadice, Joy Gerra and the hundreds of RAFI staff, friends and allies – RAFI is making a big impact. In their network of brilliant friends are Dr. Resil Mojares and the Happy Garaje couple Johanna and Mark Deutsch.

The Happy Garaje tandem that handled the visual design of the book is beyond brilliant. Their skill level is of the highest order; they are natural talents. When we needed an illustrator, the right person came along. Art professor Radel Paredes doesn't just draw and paint, he writes an opinion column, a rare combination.

'Nong (elder brother) Resil Mojares is a genuine treasure of a writer and a source of great pride for Cebu and the Philippines. He gave me wise counsel on how to proceed with the book.

When I asked him in early 2016 to suggest a good editor, he pointed to Eileen Mangubat, a good friend I've known since her early days as a reporter. She went on to become editor in chief and publisher of an independent community news-paper in Cebu, one whose icon is a native songbird, the *Siloy* or Black Shama, which is a crtically endangered species. The book narrative was ready for her review. By coincidence, Eileen had just started early retirement and was available for the project.

The order and finesse you may find in this book is the product of her painstaking editing, wonderful suggestions, and love and caring for the Earth. The team was completed with designer Gilbert Chua and proofreader Melissa Gurrea.

The stories continue to unfold.
Together, my friends, the stories will be told.

Throughout my long walk, I have been guided by my brothers Durwood Zaelke, Mario King, Martin Alfaro, Mike Frizzell, Ed Hagedorn, Junyee, Jun Davide, Nick Robinson, and sisters Peregrina Noynay, Loren Legarda, Golly Ramos and Lin Heng, among others. They have been constant companions throughout the Magic Mountain ride of my life on Earth.

Behind every success of a man is a woman. In my case, behind whatever honors I have received, is a woman … who is rolling her eyes.

Greely Remulla-Oposa is the yin of my yang. As my beloved wife, friend, adviser and partner, she can be my harshest critic but is also my staunchest supporter. Without her organized brain, I would still be in high altitude, floating about. In my small boat, she is the sail that gathers up the wind and keeps us on course. Because of her, our four children were raised to become decent, dedicated and productive members of human society.

Greely has put up with my frequent and extended absences from home. One day, I was asked what I considered my highest achievement. Which cases, awards? None of that. It is that my wife has not yet kicked me out of the house. A woman less strong and less secure would have tossed out my clothes a long time ago.

As we begin our ride in the afternoon of life, we look back. With the power of 20-20 vision from hindsight, it's but right to ask: What have I done with my life?

I can only answer, "Much, but not much." In fact, I have done so little.

If there is anything I am doing right, it is that I proudly present to the world my children – Tonyboy, Anna, Uli and Kiano. It is my hope that they will carry on the 'play projects' that we started: The School of the SEA, the SEA CAMP program, the Tagasa Bird Sanctuary, Jojo's Marine Sanctuary, a proposed Community Food Garden and a model eco-village. Or that they find their path and follow it with their hearts. That is all that matters.

Most of all, dear reader, I thank you for getting this far in our storytelling session. Please feel free to get in touch with me to share your own story.

Thank you, dear friends, brothers and sisters
All in the family of humankind.

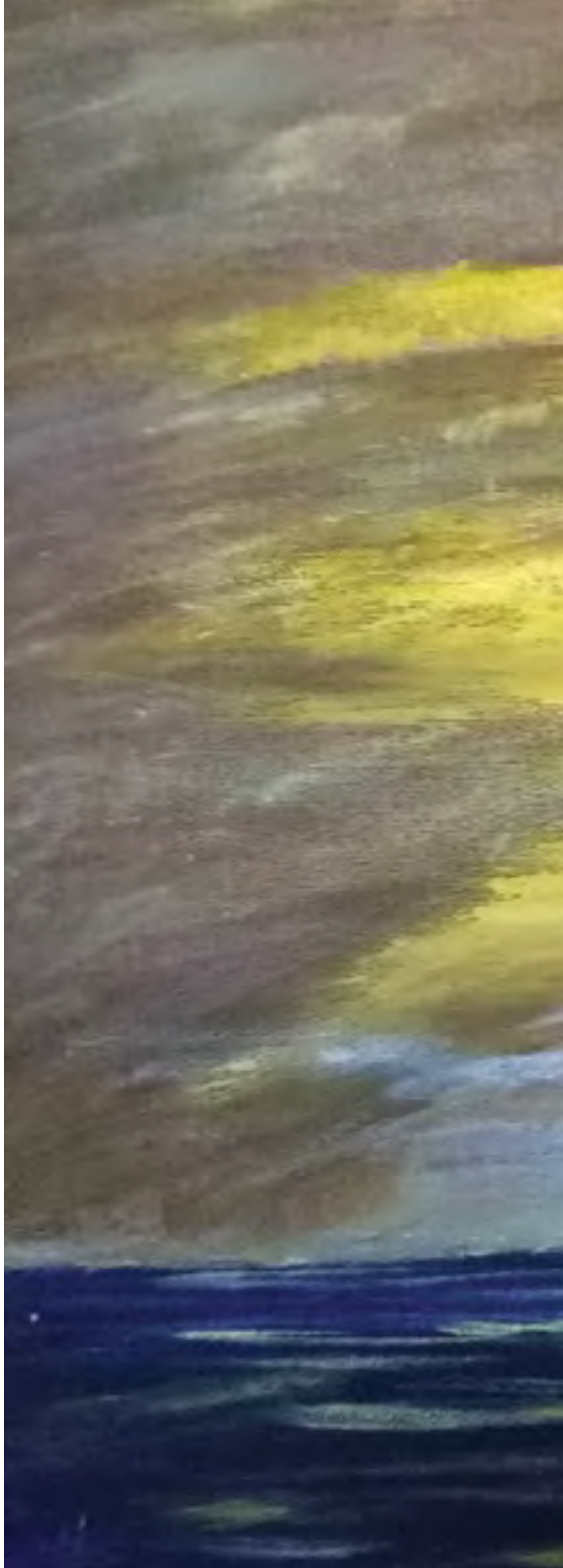
Thank you, dear friends, for walking with me
All throughout this journey,

Thank you, dear friends, for walking with me to

The world we want.

Mabuhay!

25 January 2017
School of the SEA
Bantayan Island
tonyoposa1024@gmail.com



GLOSSARY

BANTAYAN – A Filipino word whose root word '*bantay*' means to safeguard and to care for. When the accent is on the first syllable, Bantayan is the active verb meaning 'to guard over.'

When the accent is on the second syllable, the word refers to an island in Central Philippines in the Visayan Sea, the geographic heart of the richest marine waters on Earth.

It is the island where I have a home on the beach and the School of the SEA.

CAR-DIAC ARREST – The state of traffic paralysis in countries due to the uncontrolled volume of cars.

CPR ECONOMICS – The economics of Conservation, Protection and Restoration of the Sources of Life on Earth – Land, Air and Waters. The opposite of Ex-Con Economics.

EX-CON ECONOMICS – Today's model of economics that engages in reckless extraction and mindless consumption of natural resources. This system hereby stands convicted of the crime of planetary plunder.

GDP – Commonly known as 'Gross Domestic Product.' This standard is used by countries to measure the total goods and services produced, the energy and material used and consumed, all gauged by money.

It also means 'Great Disaster for the Planet.'

This flawed standard measures the quantity of what is produced and used, and thrown away. It does not measure quality.

ICJ Movement – ICJ stands for Inter-generational Climate Justice. It also means the International Court of Justice based in the Hague, The Netherlands. This movement of crack international environmental lawyers and ordinary citizens will bring the emergency issue of Climate Change before the highest court in the world.

It will engage the youth of the world in acts of enlightened citizenship to protect the Sources of

Life for themselves, their children and generations yet unborn.

LAW of Life – Land, Air and Waters. These are the vital organs of the Earth, the delicate blending of which makes possible all life on this planet. Take out one or destroy the quality of any, then Life is no more.

LOW-CONSUMING (LC) COUNTRIES – So-called 'developing countries' with low consumption of energy and materials. They know the meaning of what is enough for sustenance and avoid excess.

LC also means 'Loving and Caring.'

OVER-CONSUMING (OC) COUNTRIES – So-called 'developed countries' that consume more energy and materials than what humans need to live. OC also stands for Obsessive-Compulsive behavior, a psychological disorder characterized by symptoms of excessive accumulation of material things and a mania for control.

PERLAS – The Philippines is the beautiful Pearl of the Orient Seas or *Perlas ng Silanganan*. Its currency in pesos is used in this book as *pestehas*.

PLANETARY PLUNDER – This high crime is the result of the violence inflicted on Planet Earth in the name of progress and development. We have raided and laid to waste the elements of Life – Land, Air and Water.

ROI – Ripples of Impact, not Return on Investment. This is the ideal working principle in the use of money. For every unit of currency spent (dollar, peso, euro), it must have an impact of at least 100 times. (Not 100 percent which would only be two times.)

ROI is useful when you rely on your own meager resources without external funding. To accomplish a goal, money alone is not important. What is important is how we use it. Money – if not used well or left idle in a bank – is just a number.

ROI also means 'Return on Inspiration.' It measures how much motivation is sparked by an action.

ROAD SHARING MOVEMENT – Its motto: Those with less in wheels must have more in roads.

This movement of ordinary citizens aims to transform society by improving public transportation, clearing and expanding sidewalks, and putting up bike lanes. It seeks to divide all roads by half. Motor vehicles and efficient public transportation will occupy half while the other half is space for non-motorized mobility, i.e., pedestrian walkways, wide sidewalks and safe bike lanes.

In Filipino, it is *Bayanihan sa Daan* (cooperative heroism on the roads).

School of the SEA – The environmental training camp for the youth started in 2002 as the Bantayan Island SEA Camp. SEA stands for Sea and Earth Advocates. Volunteer teachers and friends held learning sessions for children in summer.

With a donation from a friend, the School of the SEA was inaugurated in a house made of bamboo in the summer of 2007. In June 2008, Typhoon Frank destroyed it. Out of the ruins was built a Climate Change House on concrete stilts. It survived intact during the 300-kilometer-per-hour winds of Supertyphoon Yolanda in 2013.

The school has no tuition or classrooms. Sessions are held under the trees, on the beach, beside the lagoon or on a glass bottom boat in a marine sanctuary. A 10-hectare Tagasa Wetland Wilderness and Bird Park in the area is reserved for native wildlife.

The School of the SEA is evolving into an Art Center for the Earth and a Meeting Place on the Beach.

SEA CAMP – The original name of the environment training for youths held in Bantayan. It is now called Sea and Earth Advocates of Culture, Arts and Music for the Planet. As an activity of the School of the SEA, this prepares youth leaders to be effective advocates. In their time, the new generation will protect and nurture the Sea and the Earth for themselves, and for generations yet unborn.

Coral Triangle

This program, carried out by my daughter Anna, reaches out to young 'sea-tizens' in Southeast Asia (SEA). May good fortune smile on her and may the Great Spirit bless her deeds.

VISAYAN SEA – A 1.3-million hectare body of sea water in central Philippines.

Historically, it has the highest concentration of coral reef fishes in the world and spans the provinces of Cebu, Negros, Iloilo and Masbate. However, destructive fishing methods have reduced this wealth.

The Philippines is part of the Coral Triangle which includes all or part of Indonesia, Malaysia, Brunei, Timor L'Este, Papua New Guinea and the Solomon Islands.

The Visayan Sea lies in the 'center of the center of marine life' on Earth. It is the heart of *Perlas*.

VISAYAN SEA SQUADRON – A volunteer group of citizens made up of fishermen, scuba divers, law enforcement officers, lawyers, local officials, youth leaders and citizens who seek to protect and restore the Visayan Sea.

Their stories of seaborne marine law enforcement operations are the stuff of legend. In 2001, volunteer divers and marine biology students helped conduct an underwater survey of the Visayan Sea. They did this with hardly any funds but a full 'war chest' of inspiration. The bio-survey provided baseline data for CPR efforts of the Visayan Sea.

END NOTES

PART 1 PAINTINGS ON CAVE WALLS

The origin of the quotation "Watch your thoughts..." has been lost over the years. The words have been attributed to various figures including Chinese philosopher Lao Tzu, Buddha and Ralph Waldo Emerson.

PART 4 STORY OF A MARINER

1. The term Conservation, Protection and Restoration (CPR) is from David Brower, the prominent American environmentalist. I am extending the idea to propose a new economic model.
2. "The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of Nature." – Article 2, Section 16 in the Declaration of Principles and State Policies of the 1987 Philippine Constitution
3. The Climate Change House in Sta. Fe, Bantayan Island was built after Typhoon Frank struck in 2008. http://opinion.inquirer.net/66901/filipino-name-for-storm-surge

PART 5 ECONOMICS AS TUBERCULOSIS

1. Ten Earths. Nick Robins et al., *Rethinking Paper Consumption at 8* (1996):
   'Gro Harlem Brundtland, former Prime Minister of Norway and chair of the World Commission on Environment & Development, conveys the idea of ecological footprints even more powerfully:

   'It is simply impossible for the world as a whole to sustain a Western level of consumption for all. In fact, if seven billion people were to consume as much energy and resources as we do in the West today we would need ten worlds, not one, to satisfy all our needs.'

PART 6 *PERLAS DEL MAR*

1. The "tenfold" wealth of the Philippine's biodiversity is cited in the study of Lawrence Heaney, Ph.D. and Jacinto Regalado Jr. in *Vanishing Treasures of the Philippine Rain Forest* released in 1998 by the Field Museum of Chicago.
2. Dr. Kent Carpenter, associate professor of biological studies of the Old Dominion University in Virginia, U.S.A., headed the study on biodiversity. He said,

   "Scientists have long known that the area in Southeast Asia that includes Indonesia, Malaysia and the Philippine Islands holds the richest marine biodiversity. I was amazed to discover that the extreme center of this biodiversity is in the Philippines, rather than closer to the equator." (ODU News 2005)

   The 2005 report is based on a 10-year multi-disciplinary study conducted for the Food and Agriculture Organization (FAO). Carpenter and Victor G. Springer of Smithsonian Institution's National Museum of Natural History wrote the report *Environmental Biology of Fishes.*

   "The Indo-Malay-Philippines Archipelago, or Coral Triangle has long been considered an area of high marine biodiversity. Indonesia, because of its greater area, may eventually be shown to have a greater overall marine biodiversity than the Philippines. But there is a higher concentration per species per unit area in the Philippines, with the world's highest concentration of marine species – including fish, shrimp, crabs, seaweeds, corals, sea turtles and sea snakes," said Carpenter.

   The area specified was the Verde Island sea passage between the island of Mindoro and Batangas province. Source: International Union for Conservation of Nature www.iucn.org

PART 7 WAR STORIES

1. See Pedro Walpole's article Low Forest Cover in the Philippines: *Issues and Responses at the Community Level* in the website of the Institute of Environmental Science for Social Change and its 1999 study *Decline of the Philippine Forest.*

2. *"Bahala na si Batman"* (Leave it to Batman) is a Filipino slang expression made when one is faced with a hopeless or impossible situation and chooses to leave the matter to fate.

3. Minors Oposa et. al. vs. Factoran et. al., Supreme Court of the Philippines, G.R. No. 101215, July 30, 1993. The novel class suit was filed by 43 children through their

parents and guardians to compel Environment Secretary Fulgencio Factoran Jr. to cancel all timber license agreements or logging permits in the country and to stop issuing new ones. Atty. Oposa and wife Rizalina, along with their three minor sons and daughter - Juan Antonio, Anna Rosario and Jose Alfonso - were among the petitioners.

Battle for Manila Bay

4. This issue of legal standing to sue was not disputed by the Office of the Solicitor General.

   The Government's duty to clean up rivers when the water quality has deteriorated is stated in Presidential Decree 1152 (Philippine Environment Code) of 1977. See Section 17 - *Upgrading of Water Quality* and Section 20 *Clean-up Operations.*

5. The Supreme Court decision in G.R. Nos. 171947-48 Dec. 18, 2008 ordered petitioners Metro Manila Development Authority and other government agencies to clean up, rehabilitate and preserve Manila Bay. Further orders were issued requiring each agency to submit action plans and periodic progress reports.

Other (Mis) Adventures

Forest Lines

6. Congress' role in defining the boundaries of forest lands and national parks is found in Section 4, Article XII "National Economy and Patrimony" of the 1987 Philippine Constitution.

7. The DENR announced it had completed the delineation of forest boundaries. http://denr.gov.ph/news-and-features/latest-news/895-denr-completes-delineation-of-forest-line-boundaries-.html

Laguna Lake

8. Fish pens in Laguna Lake were declared illegal. See case decision http://www.lawphil.net/judjuris/juri1995/dec1995/gr_120865_71_1995.html

Bangus fry versus power barge

9. We lost all the way to the Supreme Court. See decision http://www.lawphil.net/judjuris/juri2003/jul2003/gr_131442_2003.html

Beach Protection

10. Under Article 51 of the Water Code of the Philippines, "The banks of rivers and streams and the shores of the seas and lakes throughout their entire length…are subject to the easement of public use in the interest of recreation, navigation, floatage, fishing and salvage. No person shall be allowed to stay in this zone longer than necessary or to build structures of any kind. Presidential Decree No. 1067 series of 1976.

11. Front page story on the removal of beach structures http://cebudailynews.inquirer.net/31327/denr-demolishes-resort-kiosks-in-bantayan/amp

Action for Forest Protection

12. Report on the extent of illegal logging and forest law enforcement http://siteresources.worldbank.org/INTINDONESIA/FLEG/20171557/Oscar_Embiddo.pdf

13. Chief Justice Andres Narvasa (+), Deputy Court Administrator Juanito Bernad (+) and my dear Professor Myrna Feliciano

14. Paat vs Court of Appeals http://www.lawphil.net/judjuris/juri1997/jan1997/gr_111107_1997.html

15. Rules of Court for Environmental Cases in the Philippines <http://www.chanrobles.com/scdecisions/rulesofcourt/2010/am_09-6-8-sc_2010.php >

PART 11 STORIES OF CPR ECONOMICS

Megahalaya, India

https://asia.ifad.org "Meghalaya Livelihoods Improvement Project in the Himalayas

Green Roofs

https://www.theguardian.com/sustainable-business/offices-roofs-edible-garden-sustainable-cities

https://www.theguardian.com/world/2015/mar/20/france-decrees-new-rooftops-must-be-covered-in-plants-or-solar-panels

Bogotá Car-Free Day

https://www.theguardian.com/environment/green-living-blog/2010/jun/16/cycling-ethical-living

Paris

http://www.independent.co.uk/news/world/europe/paris-car-ban-on-champs-elysees-begins-in-battle-against-pollution-a7019491.html

No To Food Waste

http://news.nationalgeographic.com/news/2014/10/141013-food-waste-national-security-environment-science-ngfood/

Malaysia car sharing

http://ens-newswire.com/2014/05/09/malaysia-to-roll-out-electric-car-sharing-program/

Barcelona Superblocks

https://www.theguardian.com/cities/2016/may/17/superblocks-rescue-barcelona-spain-plan-give-streets-back-residents

http://www.bcnecologia.net/en/conceptual-model/superblocks

Seoul, South Korea

Cheonggyecheon Restoration Project by Dr. In-Keun Lee
http://www.slideshare.net/simrc/cheong-gye-cheon-restoration-project

Mangroves and beach forests, Philippines

http://www.philstar.com/science-and-technology/2013/12/19/1269584/shelter-storm-coastal-greenbelts-mangroves-and-beach

Bhutan Kingdom

http://www.grossnationalhappiness.com

PART 12 FINDING HAPPINESS

1. Robert Kennedy on Gross National Product (GNP)

   "Too much and for too long, we seemed to have surrendered personal excellence and community values in the mere accumulation of material things. Our Gross National Product, now, is over $800 billion dollars a year, but that Gross National Product - if we judge the United States of America by that - that Gross National Product counts air pollution and cigarette advertising, and ambulances to clear our highways of carnage...

   "It measures neither our wit nor our courage, neither our wisdom nor our learning, neither our compassion nor our devotion to our country, it measures everything in short, except that which makes life worthwhile."

   https://www.jfklibrary.org/Research/Research-Aids/Ready-Reference/RFK-Speeches/Remarks-of-Robert-F-Kennedy-at-the-University-of-Kansas-March-18-1968.aspx

2. "Common good" from Clifford Pinchot's definition of "conservation" is found in his book *Breaking New Ground*. Pinchot was the founding Chief of the U.S. Forest Service.

3. "I can look up (to the heavens) and see their beauty ...." is based on a quote from Louisa May Alcott, American novelist

4. "What the mind can achieve...." is a quote with many variations. It has been attributed to Napoleon Hill, Muhammad Ali, and Janet Jackson among others.

PART 13 ROAD SHARING MOVEMENT

1. Bradford C. Snell, Hearings on the Ground Transportation Industries in Connection with S1167 Before the S. Subcomm. on Antitrust & Monopoly, 93rd Cong. 2 (1974) (statement of Bradford C. Snell); The Street Car Conspiracy: How General Motors Deliberately Destroyed Public Transit, THE NEW ELECTRIC RAILWAY J. (1995). Snell's account has been both confirmed and contested by subsequent historians. See Guy Span, Paving the Way for Buses – The Great GM Streetcar Conspiracy, Parts I & II, BAYCROSSINGS (2003), dismissing Snell as a conspiracy theorist but then concluding: "Clearly, GM waged a war on electric traction. It was indeed an all-out assault, but by no means the single reason for the failure of rapid transit." As for the existence of the conspiracy that Snell alleged, it was found to be quite real, and criminal, by both a trial jury and a federal appellate court on review. 186 F. 2d 182. Thank you to Prof. Oliver Houck, Professor of Law of Tulane University, for this information and citation.

2. Sen. Ralph Recto speaking at the 6th Philippine Motor Show, Philippine Daily Inquirer, Sept. 17, 2016.

3. A study by the Japan International Cooperation Agency (JICA) estimated the economic cost of traffic congestion in Metro Manila at 2.4 billion pesos per day in 2012. http://www.rappler.com/business/economy-watch/51824-ph-cost-traffic-jica
An updated view in 2016 by Metro Manila transport officials placed the loss at 3 billion pesos per day. In one year, the cost would then reach P1.09 trillion (also called pestehas in Perlas). This is about one-third of the annual budget of the Philippines of P3 trillion for year 2017.At an exchange rate of 50 pesos to US$1, the amount of money wasted in traffic reaches US$21.9 billion a year.

4. The impact of motor vehicles causing 50 percent of greenhouse gases is contained in a judicial affidavit of a member of the Nobel Prize-winning UN Inter-Governmental Panel on Climate Change (IPCC). This was evidence submitted in the Road Sharing Petition filed in the Supreme Court of the Philippines on Feb. 17, 2014 to compel the Government to divide all roads by half – half for motor vehicles and half for walkways, bikeways and edible gardens.

5. The Presidential Task Force on Climate Change was reorganized under Executive Order 774 issued in 2008 by then Philippine President Gloria M. Arroyo. Three government agencies were tasked to carry out reforms in the transportation sector.

6. Petition to implement road sharing filed in the Supreme Court of the Philippines
http://www.interaksyon.com/assets/documents/notice-to-sue-final-notice-to-sue-july-102c-2013.pdf

7. Sen. Loren Legarda is a champion of climate change adaptation, the environment and disaster risk management.

8. Youths in Sta. Fe, Bantayan island lead road-sharing exercise.
http://newsinfo.inquirer.net/786813/on-resort-island-road-sharing-advocates-test-law

PAINTINGS

By the Author

Part 1	Boat at sea in Bantayan
Part 2	Waterfall
	Lilies in green pond
Part 3	Hawaii coastline
Part 5	Lone sail boat at sunset
Part 7	Purple, red sunset
	Sailboat under the moon
Part 9	Blue mountain and sea
Part 10	Laughing clouds
Part 12	Vanishing islands
Part 13	How a rain garden works
	A design for shared roads
	Yellow and orange sunrise over the sea
	Banca on the shore
Part 15	Coconut trees and sunset
Acknowledgment	
	Blue, red, yellow sunset over Bantayan
	Fishing boat and seascape

ILLUSTRATIONS

Radel Paredes

Part 12	Ladder of Longing
	Road sharing in action (3 black/white frames)
	Slice of life:
	Edible garden and community activities
	Buses, bikes, pedestrians in shared road
	Water tanks, windmills, vertical garden
Part 13	Three people and a lever
	Comparison of man standing, sitting, driving a car
	Seedlings for farmer
Part 14	Feverish Earth (title page)
Part 16	Draw the world you want to see

Happy Garaje

Part 1	Lao Tzu
Part 2	Green skyline, fish and bones (title page)
Part 13	Boy on the road
Glossary	Map of Cebu in Visayan Sea

PHOTOS

Several images used in the book were secured from online sites covered under Creative Commons License or in the Public Domain except the following:

Part 4
Portrait of a mariner, Papa Oto (Oposa family collection)

By the Author:
Three trees in School of the SEA
Volunteers make fish condominiums
Wetlands in Sta. Fe, Bantayan

Part 6
Sardine Run in Moalboal, Cebu by Ferdinand Edralin, Oceana
Cebu Hawk Owl by Godfrey Jakosalem c/o Cebu Provincial Tourism Office
Cebu Frill-winged Damselfly by Reagan Joseph T. Villanueva c/o Cebu Provincial Tourism Office
Pied Triller by Nilo Arribas Jr.
Green Sea Turtle, Danny Ocampo, Oceana

Part 7
Forest cover maps, Institute of Environmental Science for Social Change, Ateneo de Manila University
Philippine map showing the epicenter of marine life based on a study by Dr. Kent Carpenter. The red color, most intense at the center in the Visayan Sea, shows the "pattern of species richness based on sampling in early to mid1900s (Carpenter and Springer 2005)." Powerpoint slide of Dr. Porfirio Aliño of the Marine Science Institute, University of the Philippines, Diliman

Imus River with trash, Tony Oposa
Cebu Daily News front page, May 29, 2010 issue, © 2010 Cebu Daily News
Bantayan Art Center for the Earth by Radel Paredes
Campo 7 experimental forest by Rudy Alix. Part of the 100-year-old Osmeña Reforestation Project in Minglanilla, south Cebu
Illegal fish pens in Laguna Lake, Laguna Lake Development Authority
Birds in Laguna Lake by Lenny Borja

Part 9
Map of Sea Surface Heat, National Oceanographic and Atmospheric Administration (NOAA) of the United States
Copy of painting of the Cebu Flowerpecker c/o Cebu Provincial Tourism Office
Biker on Amsterdam road, Tony Oposa

Part 11
Cheonggyecheon River, GC (Mike) Kim
School of fish by Ferdinand Edralin, Oceana
Discovery Bay street scene by Jojo Sevilla

By Tony Oposa:
Carpenter Bridge, Iloilo
Iloilo River Esplanade
Las Ramblas, Barcelona

Part 12
Low tide in Sta. Fe, Bantayan by Oggie, Oceana

Part 13
Road sharing in Roxas Boulevard, Manila by Marianne Juliet Bermudez, © 2016 Philippine Daily Inquirer, online edition Feb.8, 2016
Rice cakes (bibingka) cooking in stoves in Mandaue City by Rudy Alix
Community garden in Bolzano, Italy by Hilary Solly. Photo shows members of the Orto Semirurali Garten managed by the Association Donne Nissa.
Swimming pool makeover as edible garden in the residence of Eleanor Rivera in Lahug, Cebu City. Landscape design and photo by Michelle Domocol, michelledomocol.carbonmade.co
Children harvest bokchoy in organic garden of Healing Present Nature and Wellness Farm in Balamban, Cebu. Photo courtesy of founder Eleanor Rivera
Philippine Daily Inquirer front page, Feb. 18, 2014 issue © 2014 Philippine Daily Inquirer
Cebu Daily News front page, Sept. 29, 2014 issue © 2014 Cebu Daily News

From contributors:
No sidewalks in urban Philippine roads
Local youths paint lanes in Bantayan
Philippine hybrid road train

By Tony Oposa:
Man-made pond with lilies in Bantayan
Sidewalks and bike paths in Paris and Barcelona
Pasig City road sharing event
Road trains in Shanghai and Oslo
Las Ramblas in Barcelona
Pedestrian road in Malaga, Spain

Part 14
People on seashore by Ferdinand Edralin, Oceana
Fisherman's boat in mangroves by Ferdinand Edralin, Oceana

Part 15
Bantayan Art Center sign by Radel Paredes
Trees in Bantayan School of the SEA by Radel Paredes

Part 16
Fishermen and sunset by Ferdinand Edralin, Oceana

Glossary
Map of Coral Triangle from contributor
Map of Visayan Sea from Dr. Porfirio Aliño (Map details enhanced for this book)

‘The wise man goes to the mountain,
the happy man goes to the sea.’

"As I read the book, there were tears in my eyes. He writes as a child, as a student of others, and as a student of Life itself. He is telling us a story of how to repair our generation, and how to plant seeds for those yet unborn."

— **John Bonine**
Law Professor, University of Oregon;
Co-founder, Environmental Law Alliance
Worldwide (E-LAW)

"This is the magnum opus of a man with a mission to preach the gospel of love for God's wonderful creation – Mother Earth – and of faith in and hope for a humanity which shall enjoy His glorious blessings."

— **Hilario G. Davide Jr.**, Chief Justice (ret.)
Supreme Court of the Philippines

"The story is told by a man who has loved and protected the Earth all his life. Its message echoes throughout the world and inspires us to better care for our planet. It should be read by all."

— **Lye Lin Heng**, Director
Asia-Pacific Center for Environmental Law
Singapore

"Tony's prose reads as poetry. He tells us stories of how each of us holds the key to our own prison doors. This colorful book engages you in a global conversation about how we each make a difference as we pass this world onto the heirs of our children, and to each plant and animal that sustain our Earth."

— **Nick Robinson**, Professor
Haub Law School at Pace University
New York

"A joyous contribution to the magnificence of our world and of the vital need for action. It is a reflection of Tony's singular contribution to our sense of wellbeing and happiness."

— **Philippe Sands**
International Lawyer and Author
United Kingdom

"Delivering his stories and poems with endless charm and good humor, and a deceptive simplicity, Oposa is in truth a fierce and passionate fighter for a better world. The journey is its own reward, he writes, and wow, this is some journey! Oposa has made a big difference already, and this book will make it bigger."

— **Gus Speth**, former Dean
Yale School of Forestry and
Environmental Studies