

Don't waste your waste



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This comic strip is part of a larger [waste management project](#) developed by the **EXO Foundation**.

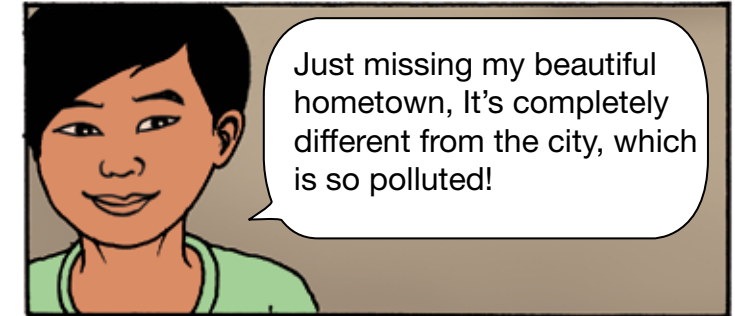
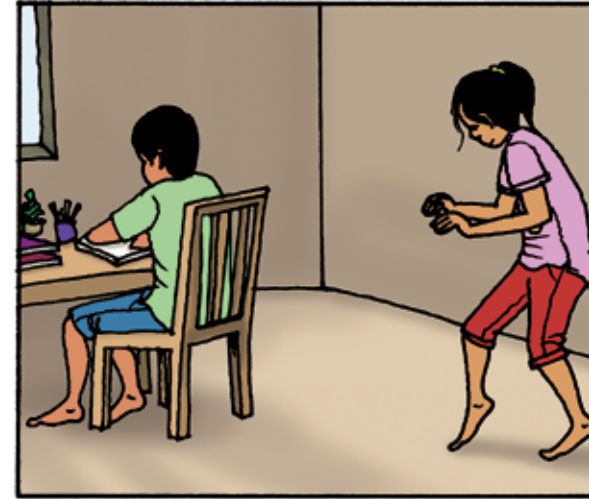
It is comprised of workshops designed to educate local communities on waste management, explaining how to sort waste, how to make compost, how to recycle some plastic waste, as well as financial and technical support for constructions made of plastic bottle bricks filled with plastic waste.

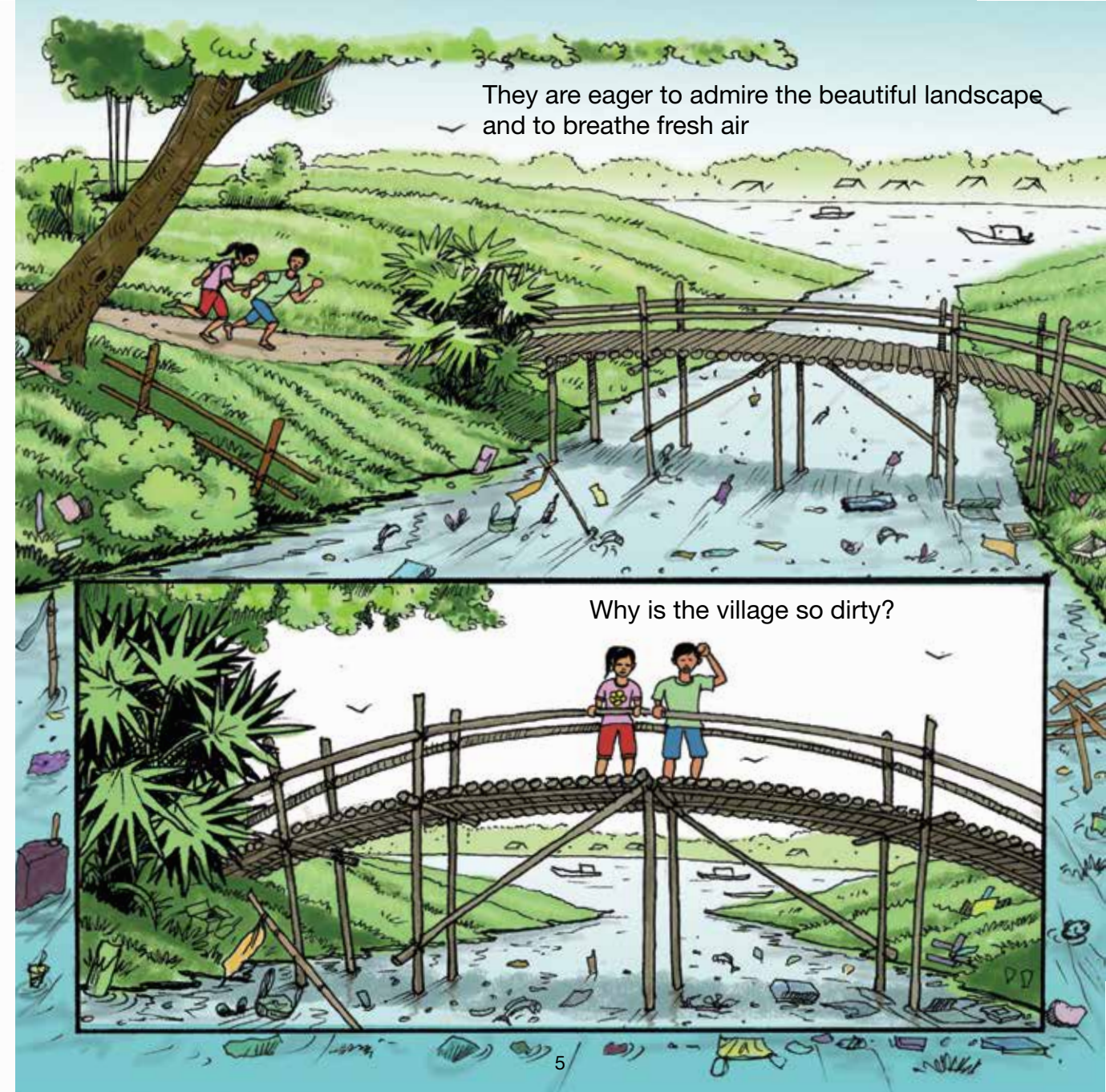
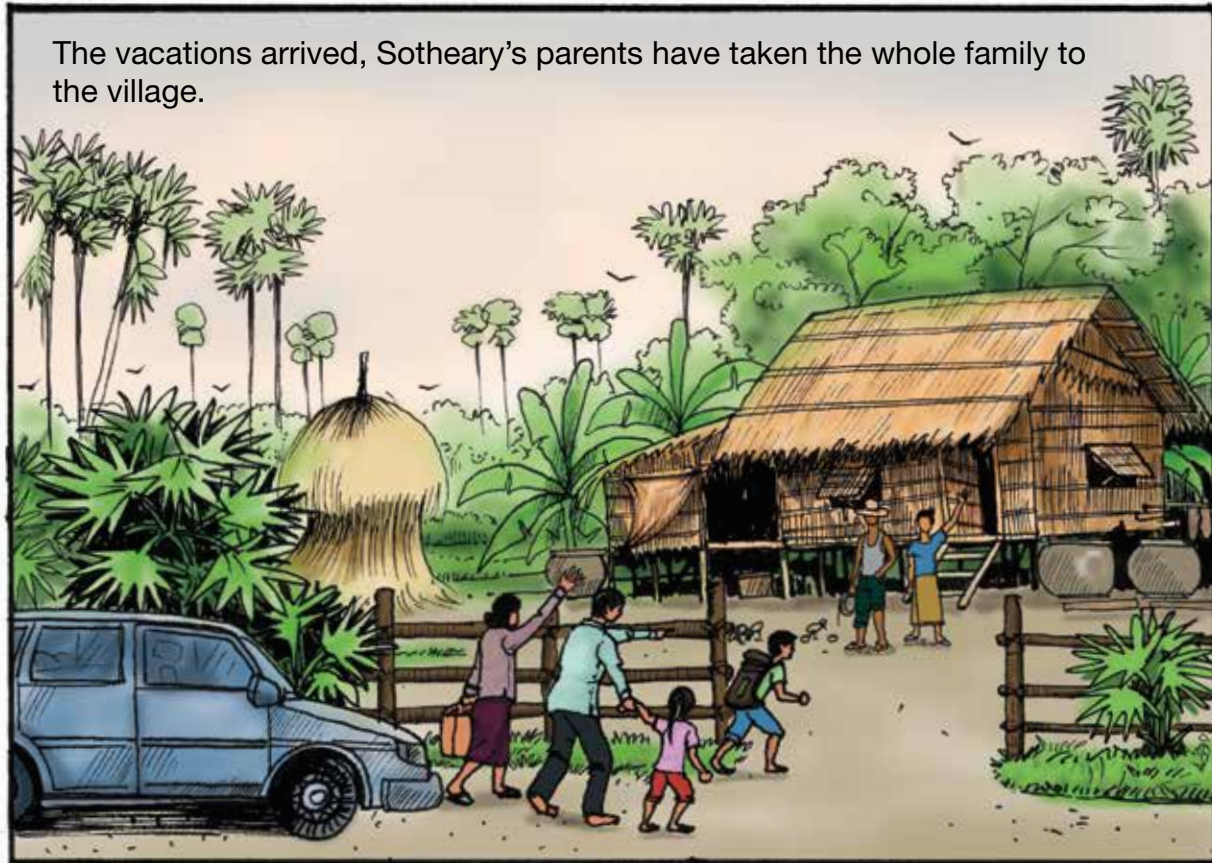
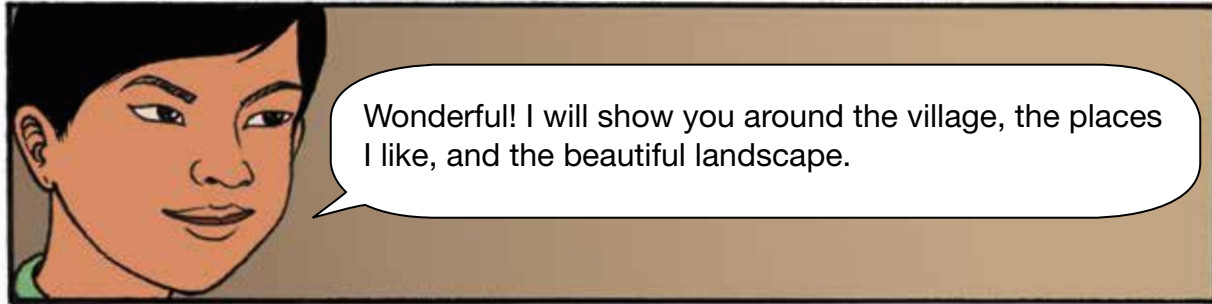
[A Short animation, 'Plastic Waste Never Dies'](#), was also developed in partnership with UNESCO for the Royal Cambodian Ministry of Tourism. Watch it on exofoundation.org or on Youtube.

If you are interested to develop this project in your community, please contact us at: contact@exofoundation.org



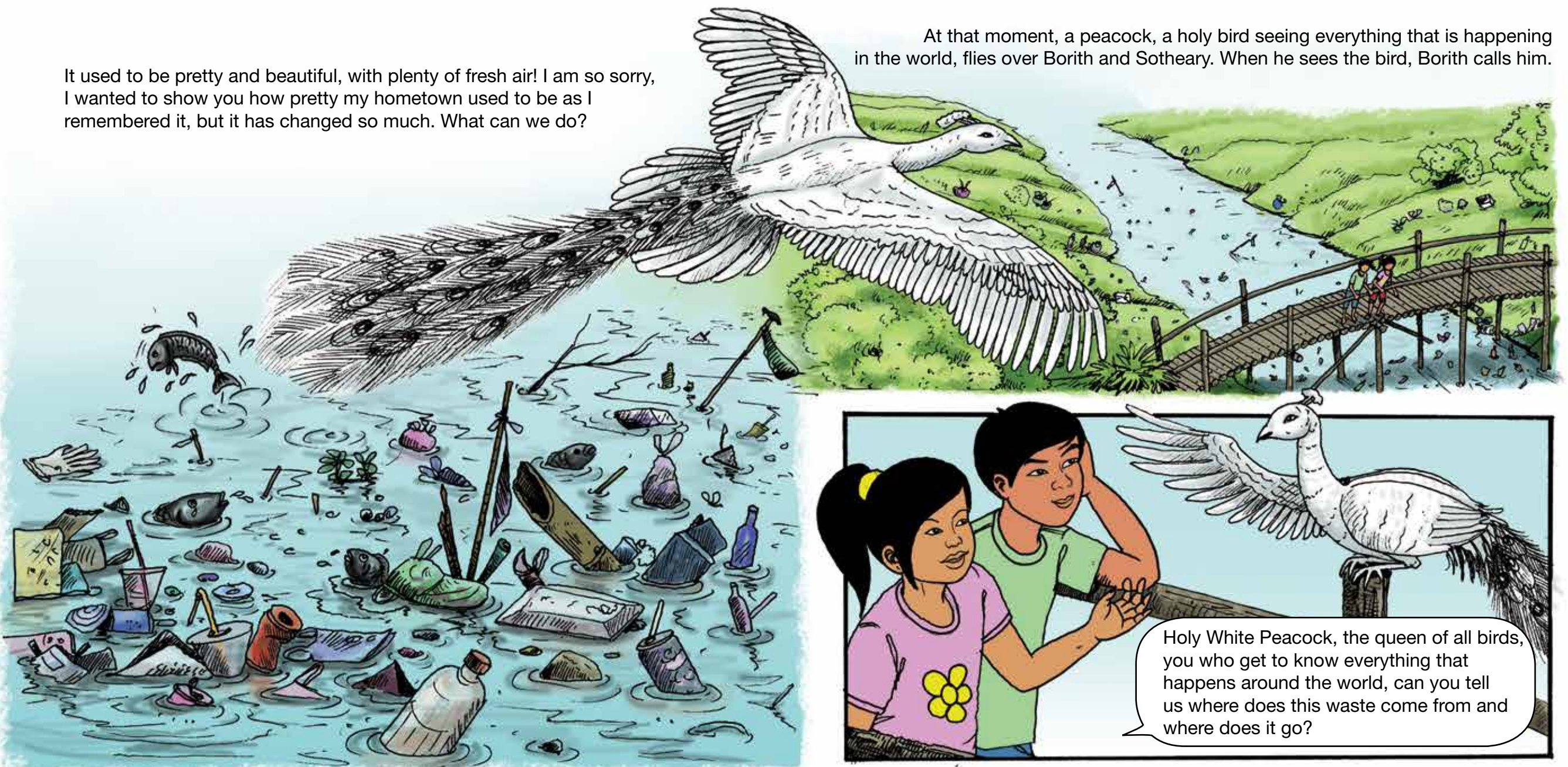
A 15 year-old boy, Borith, is sitting alone in a house in the city. Borith's parents sent him to the city to study and to live with his aunt. Borith is missing his hometown, which is very beautiful unlike the city, which has dust and garbage everywhere. Sotheary, a girl is 14 years old, visit him by surprise.





It used to be pretty and beautiful, with plenty of fresh air! I am so sorry, I wanted to show you how pretty my hometown used to be as I remembered it, but it has changed so much. What can we do?

At that moment, a peacock, a holy bird seeing everything that is happening in the world, flies over Borith and Sotheary. When he sees the bird, Borith calls him.



My dear children, human beings are very dirty and cause much harm to animals through their activities on a daily basis. Plastic waste is a real plague, it causes the death of many animals as they ingest plastic bags and solid pieces or particles of plastic by mistake. The waste comes from your daily consumption; when you buy food, use straws for every drink, and then throw the packaging and straws on the ground. The wind then moves this rubbish to the rivers that lead into the sea.

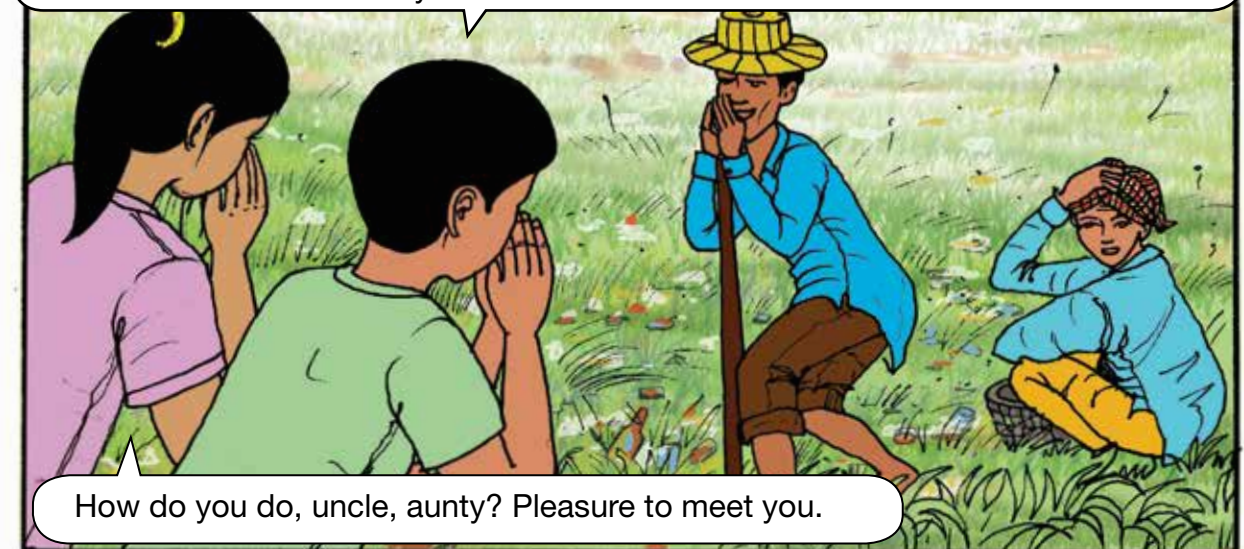
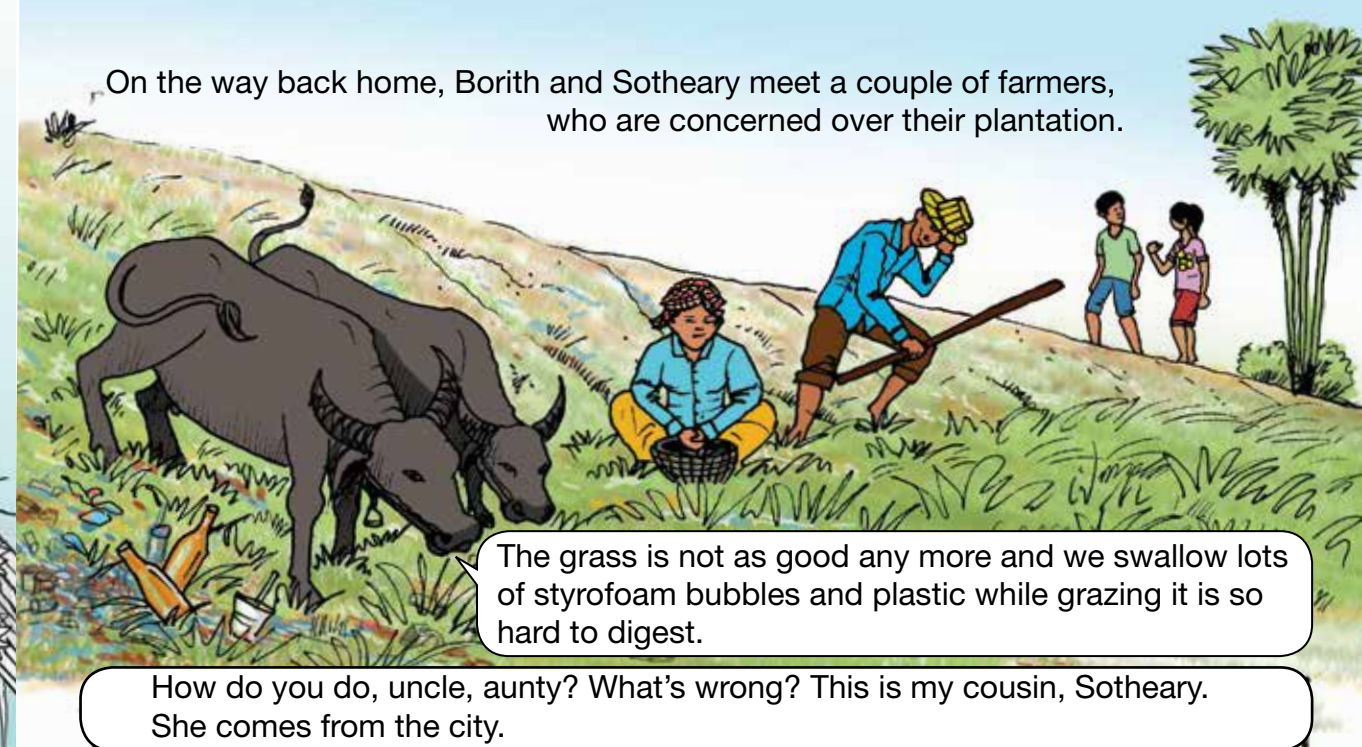
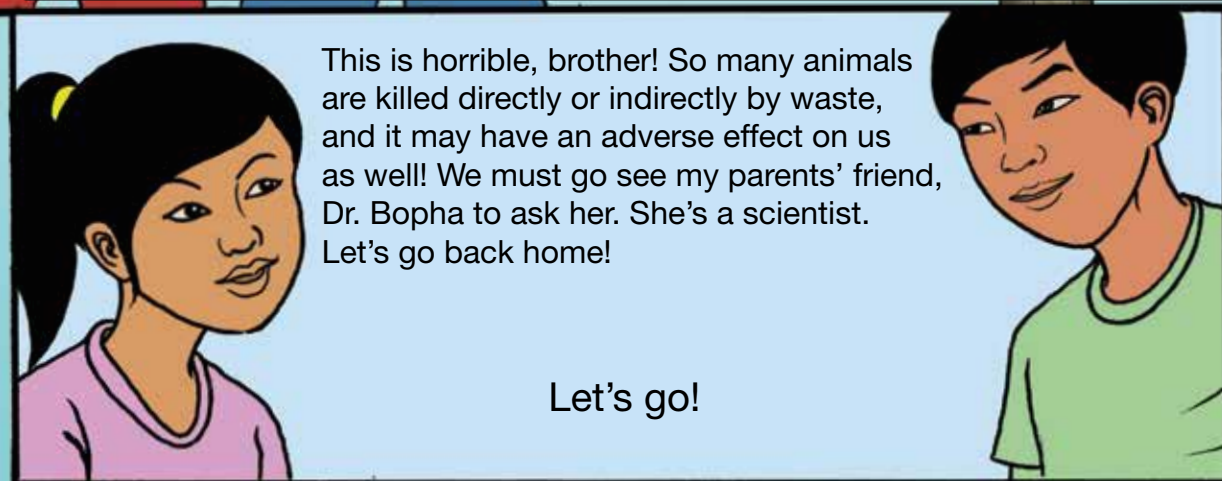
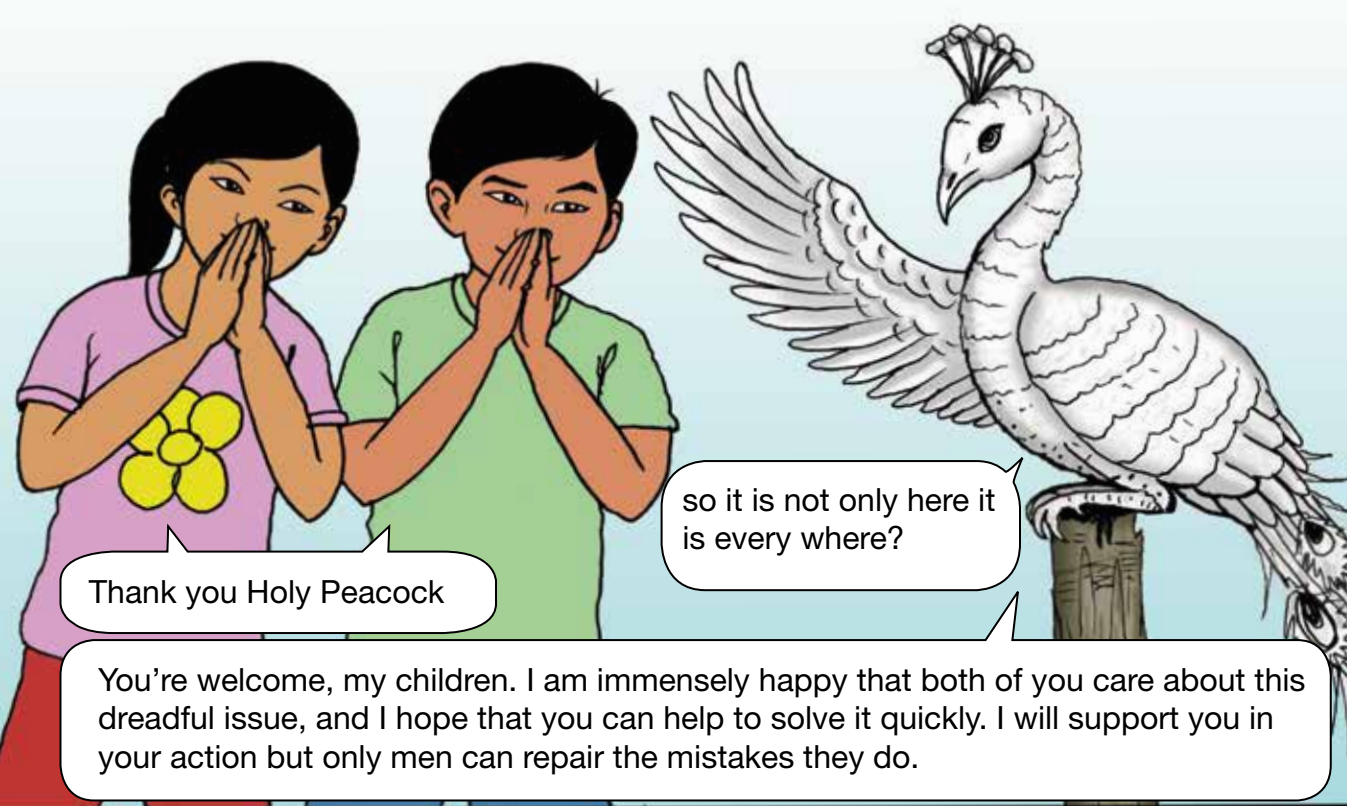


In the Pacific Ocean, waste from around the world gather and have formed a huge island.

Even big animals like whale die as they swallow lots of water to eat plankton they swallow plastic bags and the plastic bags bloat their stomach or they get entangled caused to die.

Scientists who discovered a dead sperm whale and conducted an autopsy, found that inside whale's usually bloated stomach of hundred plastic bags.

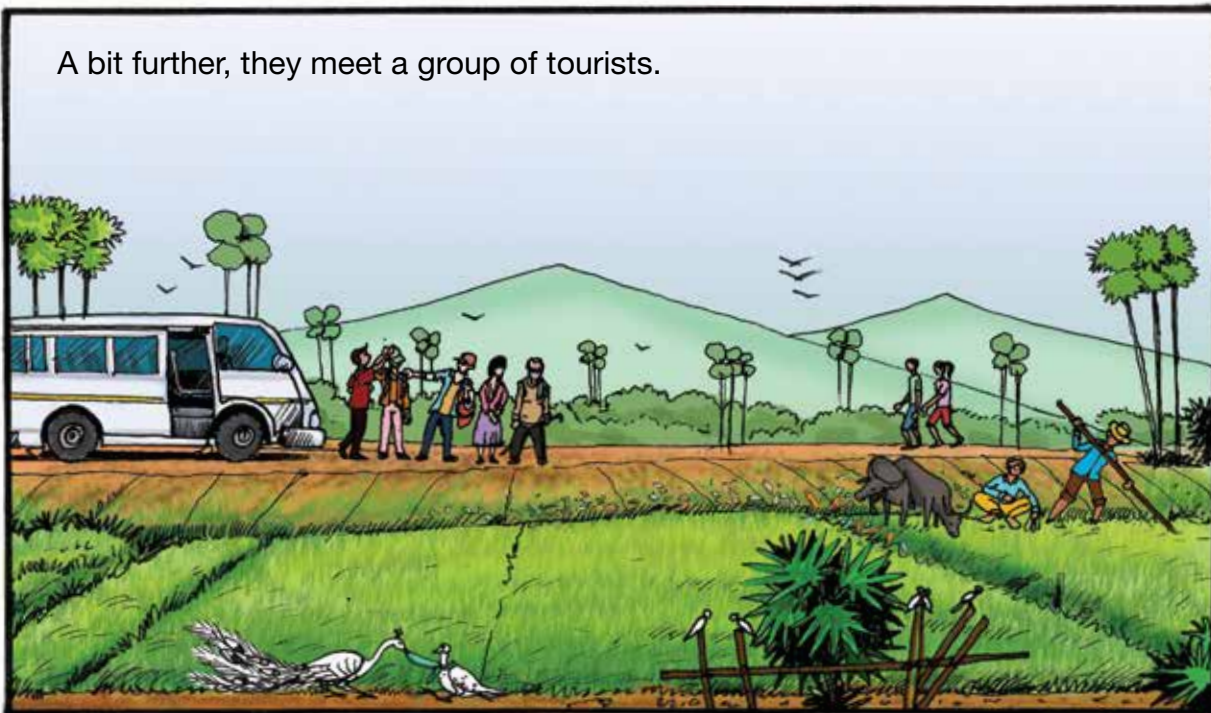




It's Borith! Bless you, girl. I am concerned as the plastic waste is polluting my fields, and decreasing the production gradually. I used to clean it frequently, but more keeps coming with the wind! I am forced to use more chemical fertilizer to boost the production. My chicken and buffaloes are sick, they eat plastic from the soil and drink the contaminated water from the pond, and my kids are also sick from inhaling the fertilizer. I don't know how to handle this, can you help me?



A bit further, they meet a group of tourists.



Hi, where do you come from?

Hi, nice to meet you.
We come from Taiwan.

How's your visit? What do you think of our country?

Your country has beautiful landscapes and a noble history and civilization, which attract many tourists, including us. However, we've been quite shocked by the incredible amount of waste everywhere. It looks so dirty! It is rather disappointing and not hygienic we are afraid to get sick, and we may not come back unless you manage to address this issue.

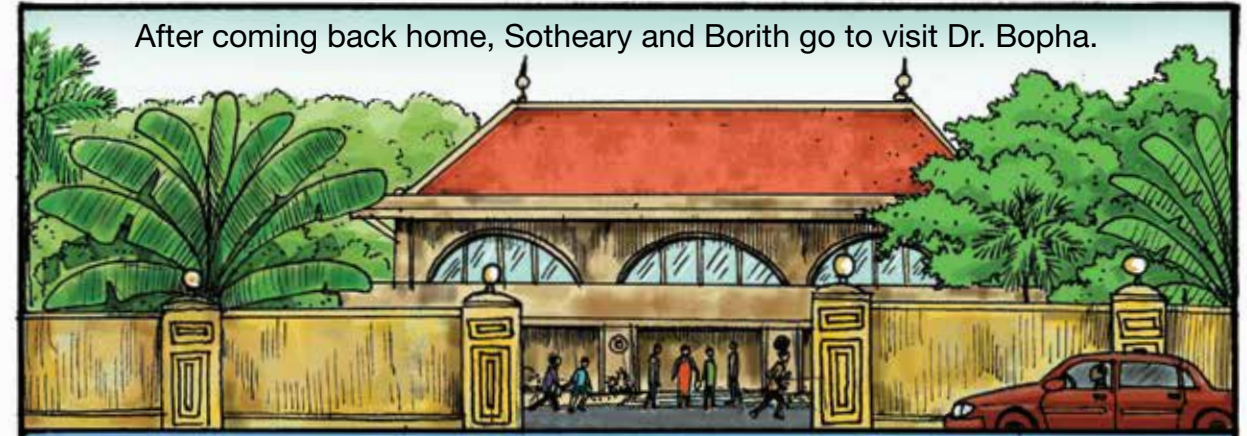




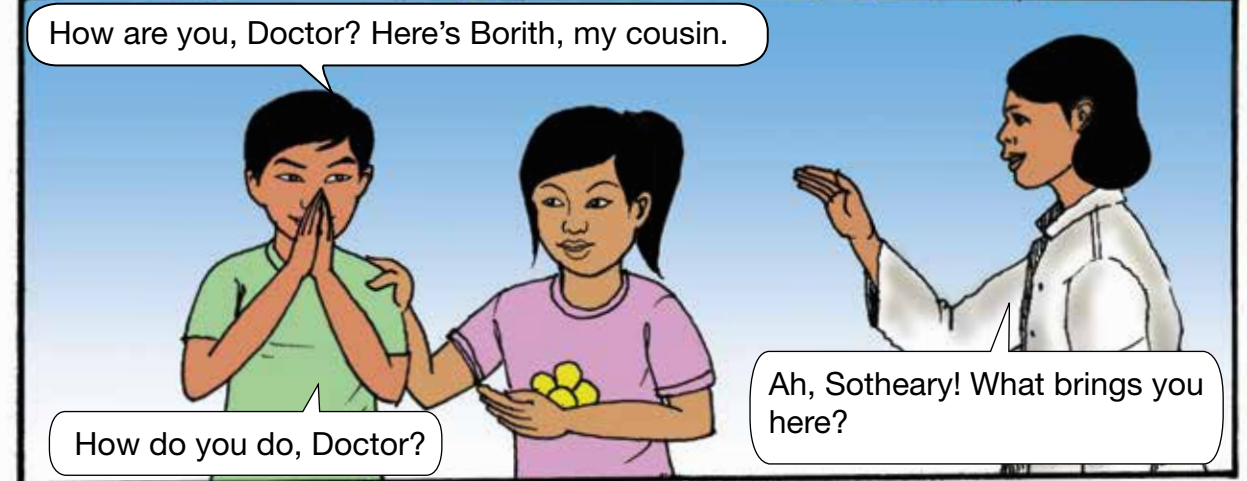
Yes you are right we are shocked ourselves too. Thanks for visiting our country, and for sharing your views. It was nice to meet you, and we really hope that you will be back again. We promise we do our best to improve this.



Borith and Sotheary continue home and think about the issues and concerns that they've heard about today. Together, they decide to look for solutions to reduce and clean the waste.



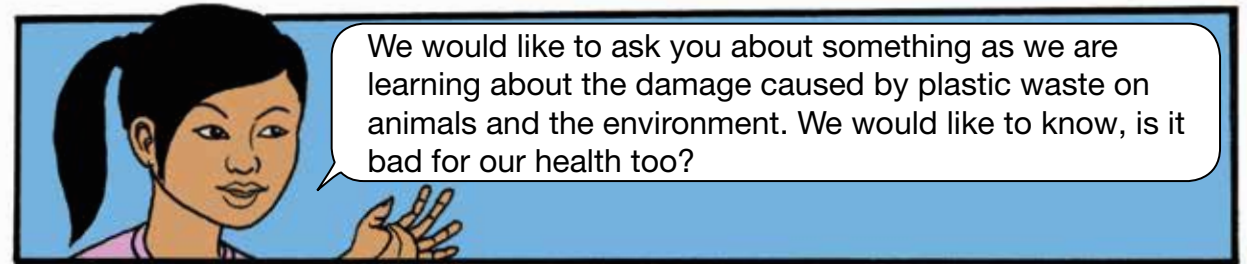
After coming back home, Sotheary and Borith go to visit Dr. Bopha.



How are you, Doctor? Here's Borith, my cousin.

How do you do, Doctor?

Ah, Sotheary! What brings you here?



We would like to ask you about something as we are learning about the damage caused by plastic waste on animals and the environment. We would like to know, is it bad for our health too?

Oh, is that a story? Of course it is also bad for men, as plastic waste contains many toxic chemicals. Chemical components never disappear, only their form changes. Some waste takes many years to disintegrate, while others disintegrate in just one year into very small particles you cannot see but which remain in the water or in the soil. They are then absorbed by squids, fishes, animals and plants, and of course when you eat fish, or drink water from the pond or the river, you probably absorb invisible chemical components coming from disintegrated plastic or even tiny pieces of plastic or styrofoam.



Borith and Sotheary thank
Dr Bopha, and say their goodbyes.



Borith, my brother, things look really bad. Everybody complains about waste, but nobody is doing anything whereas actually we are all responsible for it as we are all consuming plastic every day. What can we do? We should go and ask the monk, he always gives good advice!



You are right, my sister! Let's go see him!

How do you do, revered monk? We come to seek your wisdom. We are worried about the effects of waste on the environment and all living creatures including men.



Well, one of the most important teachings of Buddha is that whatever you do it has consequences. So if you do not respect nature, you will have to bear the consequences: scarcity of drinkable water, polluted air, soils, rivers, and seas. It is all about Karma. It means that whatever we do, with our body, speech, or mind, it will have a corresponding result. Each action, even the smallest ones, is full of consequences.

As Buddha said, ***"Do not overlook negative actions merely because they are small; however small a spark may be, it can burn down a haystack as big as a mountain and a little poison can cause death."***

Similarly he said, "Do not overlook tiny good actions, thinking they are of no benefit; even tiny drops of water in the end will fill a huge vessel and a tiny seed can become a huge tree."



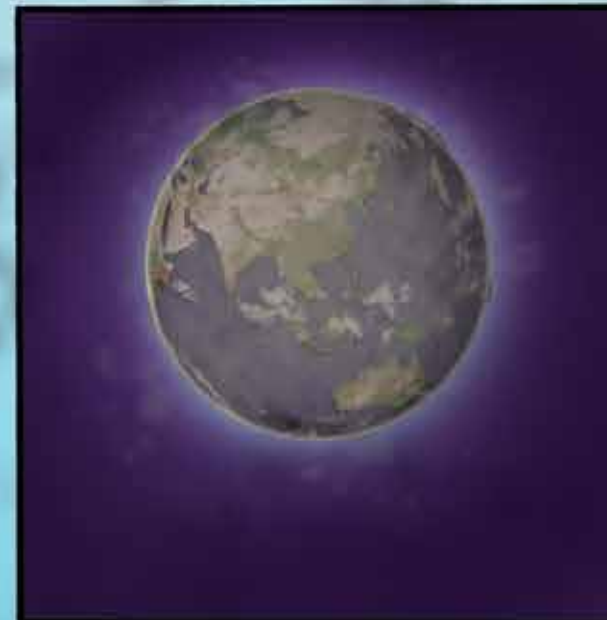
So if you do not wish destruction to happen, you need to stop using as much as possible all forms of plastic, bags, bottles, as well as items such as styrofoam boxes and straws. Use instead a cloth bag like mine, and keep it always with you when you go to the market. Eat at a restaurant, or even at home. Cook food instead of buying processed food which is not very healthy as well and usually contains many unhealthy ingredients. You can also go and talk to CLEAN (Community Led Environmental Action Network) an environmental NGO, they are working on this issue with the EXO Foundation.



After listening to the monk, Borith and Sotheary head back home.



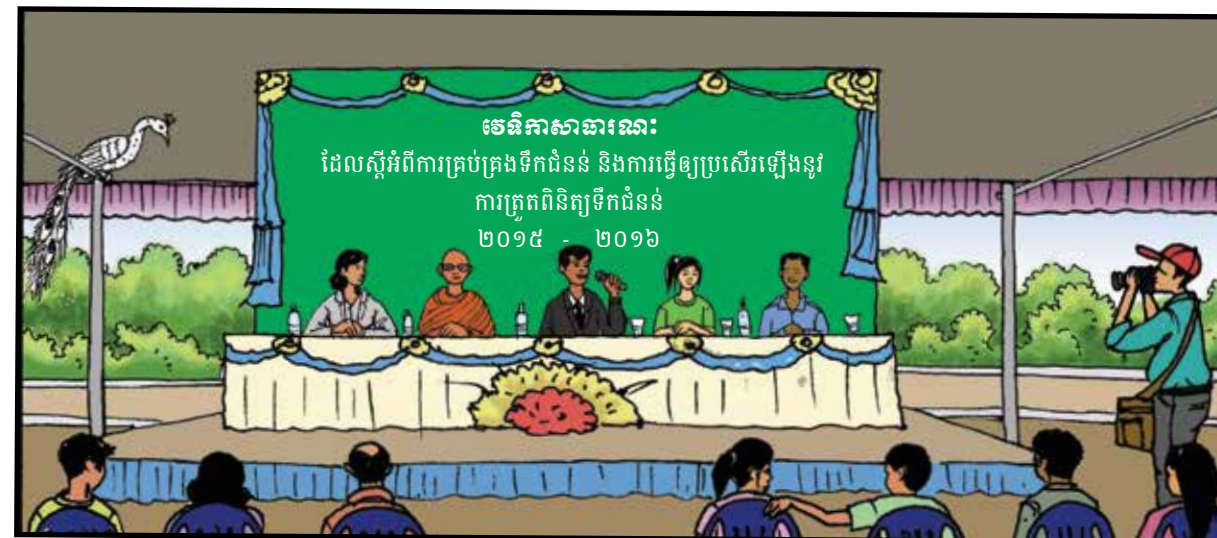
That night Borith and Sotheary have the same dream: they see plastic waste expanding everywhere in the world. Everyone in the world faces new challenges and death. Animals die, people get sick, ultimately the world becomes quiet and deserted.



We must do something! Let's join CLEAN and start this programme with the people.



A few days later the municipality together with CLEAN conduct a public forum about the management of floods and improvement of flood controls. Borith and Sotheary have asked to attend the event.



We've spent millions to rehabilitate the city's sewage system to prevent flooding but with people throwing waste everywhere, it blocks the sewage system when it rains, causing the flood situation to get worse. Moreover tourists complain our cities and countryside is dirty.



Excuse me sir, People don't realize the consequences, they need to be explained how to manage their waste.

Don't you think it would be worth to explain people and organize better cleaning and waste collection around the city?



You're right my boy! We will improve the city cleaning and waste collection system but for it to succeed, we need everyone to participate! Mrs Chamroen ? from CLEAN can you tell us what to do?



I am very happy to see that young people are concerned by this issue as, yes, it is indeed a major problem everywhere in the world. The best is to forbid plastic bags as they did in different places in Europe, the United States or even Africa. First people need to understand the difference between different types of waste. We have 2 main types; the toxic ones and the non-toxic waste which are made of natural components.

THE TOXIC WASTE

Some are very toxic they are called hazardous waste: batteries, chemical products, paints, industrial waste, hospital waste, inks, fluorescent tubes, bleach cleaners, solvent, etc. They need to be disposed separately and treated; ask the municipality or the ministry of environment what to do with these. If nothing exists, it is better to bury them deep in the soil far from cultivated land and sources of water but it is very important not to release them into rivers, seas or ponds or just on the floor.



PLASTIC WASTE

Soft and hard plastic in all forms including styrofoam - is not as dangerous but its accumulation creates all the problems we mentioned before; non-organic, they are toxic when they degrade.



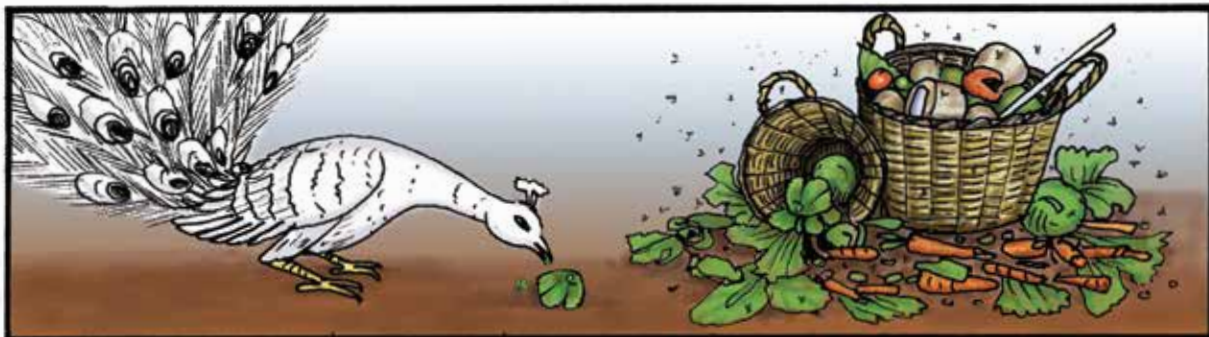
NON-TOXIC WASTE

Cardboard, metal, glass can be recycled but some countries don't do it yet but in any case they are not as dangerous as they are made from natural components.



ORGANIC WASTE

is all what is biodegradable all vegetal products, fruits, vegetables, leaves, animal products are biodegradable as well.



Then what can be done is to follow three rules:

RULE 1:

Never throw anything directly on the ground wherever you are even if the place is already dirty; it is no because many are dirty that we shall follow the bad examples.



RULE 2:

Never burn waste in the open air, this create fumes which can be toxic and are one of the greatest contributions to global warming and climate change (even when the waste is non toxic).



RULE 3: REDUCE – REUSE – RECYCLE

REDUCE the usage of all toxic items. In markets and supermarkets, say no to plastic bags and containers (styrofoam included), avoid using straws, and batteries. Instead, replace batteries with solar batteries, use non-chemical products for cleaning such as baking soda, cloth bags for shopping, banana leaves for packaging, and drink from your own glass or directly from the can after cleaning it.



REUSE: We can reuse many of this waste. Plastic bags which are strong can be reused many times. Bottles can be reused in many ways you just need a bit of creativity; to contain filtered water from the pond or other liquids, the fruit juice sellers can also reuse them after cleaning.



RECYCLE: Sell or give your waste to the poor waste collectors bottles, papers, etc. Some make lamps with them.



We also found a very good way to reuse plastic bottles; we fill them with plastic bags, aluminium wrappings, cigarette butts and use them instead of bricks to build walls for buildings.



All organic waste in particular vegetal one can be mixed and transformed in a few weeks into organic fertilizer, which is better for the soil.



That sounds really good. Let's all clean together; we can employ the waste pickers to fill plastic bottles with plastic bags, and then use these as bricks. They will earn more money than by selling the empty bottles so they are happy to participate and we can start a new activity so they earn more.



- One team of waste collectors will collect organic waste that CLEAN will buy from them, to transform it into a compost and then sell it to farmers for cheaper price than chemical fertilisers.
- One team of waste collectors for all plastic waste to develop the bottle brick activity.
- Inside the city we will put different dustbins in main public areas; one for organic waste and one for non organic waste.
- We will encourage people to bring hazardous waste at the City Hall so we can organise their treatment.



A few weeks later after the authorities made a campaign to explain people the waste project, everyone join forces joyfully to clean up their living environments.



➤ In the city conducted by the authority, the monks and Sotheary citizens construct a tourist and environmental center using bottle bricks,



We can build many things with that technique schools, libraries, public toilets, tourist information centre, walls, benches, etc. This way we can employ the poor waste pickers so they get more money, we get a clean city and tourists will make positive comments.

➤ In the countryside the farmers, the tourists under Borith and CLEAN support build a wall so his cattle do not venture outside his farm.



Consequently, both the city and the countryside become once again clean and beautiful.

The Holy Peacock and animals gather to thank men,
for making their life more healthy.
At the end every one is healthy and happy!



THE END

Facts & Practical Information



SORT YOUR OWN WASTE NEVER BURN IT

TYPES OF WASTE

1. HAZARDOUS WASTE

It is extremely polluting and should not be disposed in the open air but given to the municipality whose duty is to treat them safely if no company exists. In Cambodia the Ministry of Environment is collecting them.



- Batteries are the most dangerous they contain heavy metals and very toxic components. All batteries are to be separated and sent ; with lithium, nickel cadmium, or button cell batteries.
- Fluorescent light bulbs and thermometers as they contain mercury which is extremely dangerous for health.
- Household chemicals, Caustic / Cleaning agents.

Use instead a mix of baking soda (it is a fungicide and whitening agent which can clean everything), soap and lemon juice and/or white vinegar. This is the best to clean and disinfect everything in the house as well for cleaning laundry.

- All paints and solvents; house varnishes, nail varnish, glue
- Automotive waste motor oil, batteries.
- Electronics; computers, televisions, cell
- Phones, radios, ect.), fridges.
- Medicines.
- Chemical Pesticides (insecticides, herbicides, fungicides, etc.)



2. RECYCLABLE WASTE:

- Plastic packaging: oil, ketchup and mayonnaise bottles; packaging of cosmetic products, plastic dishes and boxes; plastic bags, other clean plastic packaging.
- Glass packaging: glass bottles, glass jars, other clean glass packaging.
- Metal packaging: tins, metal lids and tops of food and drink packaging, other clean metal packaging.
- Drink cartons: clean milk, juice cartons.



3. BIODEGRADABLE WASTE:

With biodegradable waste you can make compost to replace chemical fertilisers, this will increase the field productivity and save you money as it is free as you only use your own waste. It takes 3 to 4 months under warm climates.

Place all biodegradable waste in a large bin or, outside but protected from heavy rain.

Add some soil to the waste, add some water it should be moist but not too wet, mix well every 2 weeks the pile, some heat will be felt it means it is working, and some worms will appear which is a very good sign.

When you see it is turning into some kind of soil, it is ready to use.



You can include for compost all vegetal waste; fruit and vegetables, bread, butter and margarine, leaves, rice husk, used tea and coffee, plants, flowers, manure from herbivore and birds, egg and egg shells.

The followings are biodegradable you can throw them in a general bin, as they are not dangerous but do not to use them for composting; bones, meat products manure from carnivore animals (cats & dogs, men) eating meat, cooking oil, milk, sour milk, soup, sauce, and other liquid food and foodstuffs but.

FACTS ABOUT PLASTIC WASTE

- 500 billion plastic bags are used each year in the world.
- 206 kilograms of plastic waste are dumped every second in our oceans.

They are all human.

- Only 5% of plastic is recycled.
- 60 to 90% of the waste found in waters are made of plastic.
- 1 million seabirds and 100,000 sea turtles die each year from ingestion or entangled in plastic waste.
- According to the Center for Biological Diversity, in 2014, 40% of the surface of the world's oceans is covered with floating garbage and plastics.
- Plastic and styrofoam components (polymers) are known to cause cancers and reproductive problems (infertility) in humans.

OPEN BURNING IS DANGEROUS AND ILLEGAL

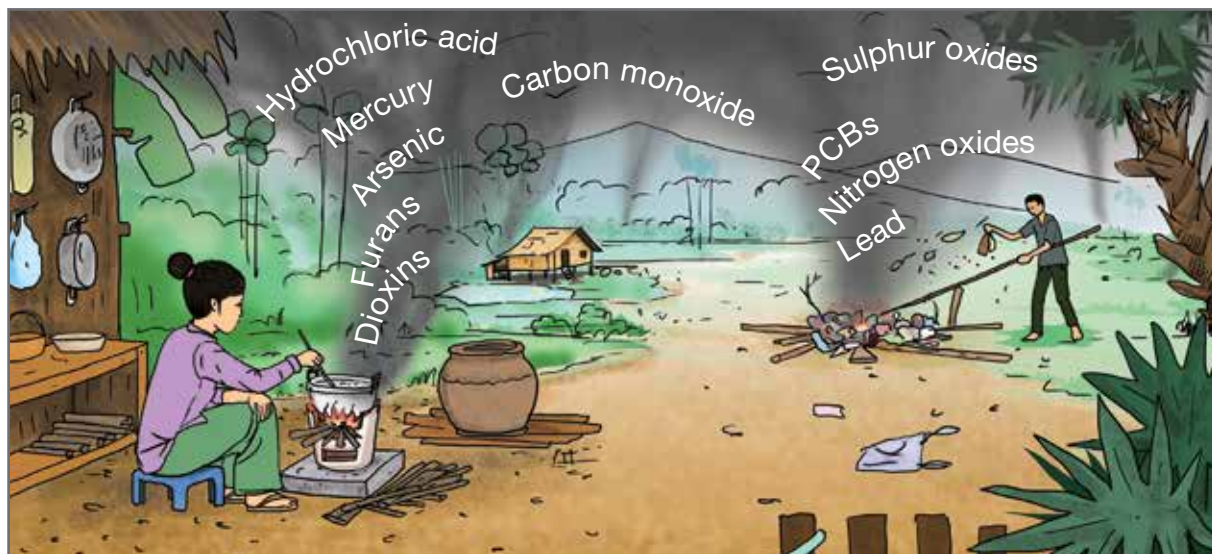
What is Open Burning?

Open burning refers to burning garbage in barrels, open pits or outdoor furnaces. Open burning of garbage is much more harmful to your health and the environment than you may think.

Some people may say, “ This is local culture, we’ve been burning garbage for ages, so what’s the big deal now?”

We now understand that open burning of garbage -- even seemingly harmless materials like leaves, branches, paper, cardboard, yard waste, and construction debris -- releases a hazardous mixture of cancer-causing compounds and other toxic substances when open-burned. But everybody keep burning their waste!

Global Warming Effects:



Black carbon emitted by cooking stoves using wood or charcoal and by burning of waste, has emerged as the second cause of global warming (18%).

Black carbon is 2000 times more powerful than CO₂ emission in making global warming and climate change. Some of the pollutants contained in the smoke from open burning of garbage include:

- Dioxins
- Furans
- Arsenic
- Mercury
- PCBs
- Lead
- Carbon monoxide
- Nitrogen oxides
- Sulphur oxides
- Hydrochloric acid
- Index
- CO₂

By laws

Open burning is officially strongly prohibited by law since 1999 in Cambodia and shall be punished:

- Sub-Decree On Solid Waste Management, No. 36 Dated on 27 April 1999
- Inter-Ministerial Declaration Of Ministry Of Interior-Ministry Of Environment On Waste And Solid Waste Management In Province / Municipalities Of The Kingdom Of Cambodia, No. 80 dated in February 2003
- Sub -Decree on Garbage and Urban Solid Waste Management, No.: 113 Dated on 27 August 2015

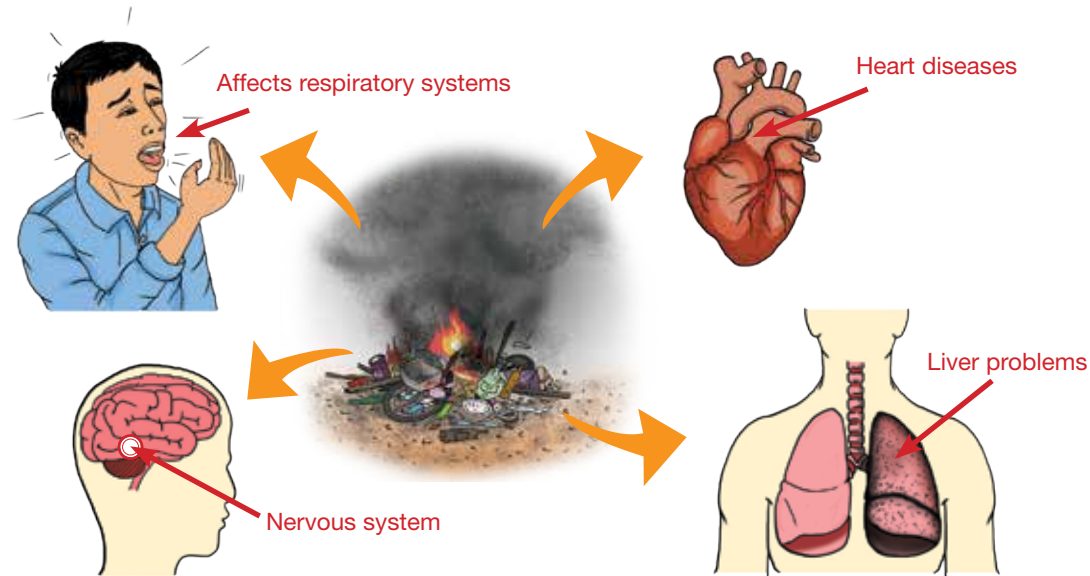


Health Hazards

Open burning of garbage poses health risks to those exposed directly to the smoke. It affects first people with sensitive respiratory systems, the children and the elderly. In the short term, exposure to smoke can cause headaches, nausea, and rashes. Over time, it increases the risk of developing:

- Heart diseases
- Certain types of cancers
- Liver problems
- Impairment of the immune system, the endocrine system, and reproductive functions
- Effects on the developing nervous system and other developmental events

Aside direct exposure to smoke, high levels of dioxins and furans are deposited on crops, in our streams and in our lakes. They are then entering the food chain, eaten by animals and people.



Safer Alternatives

Following the **3Rs (Reduce, Reuse, Recycle)** principle and disposing of your garbage in a safer way will help you protect your health and the environment.



Reduce: Avoid disposable items.

Buy products in bulk instead of individually wrapped or single-serving sizes. Buy durable products and products that can be recharged, repaired, or refilled.



Reuse (& repair): Donate items, repair, making crafts or sell to junkshops



Recycle: Separate the recyclable items for waste collection or sell to junkshops



•**Compost:** Install a backyard compost bin for composting your kitchen and all vegetal waste, search around your area for a community's organics collection program, or organise one!

•**Dispose:** Put your garbage out for collection or bring it to your local landfill.

Reduce

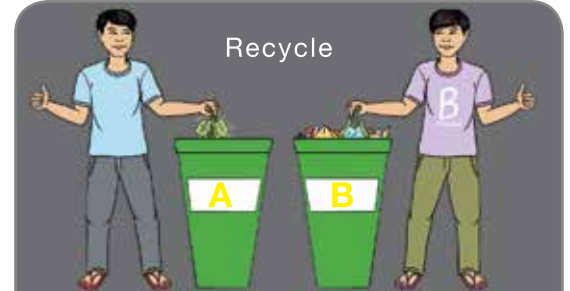


Using ecologic bag instead

Reuse



Recycle



A Recyclable Bin B Non Recyclable Bin

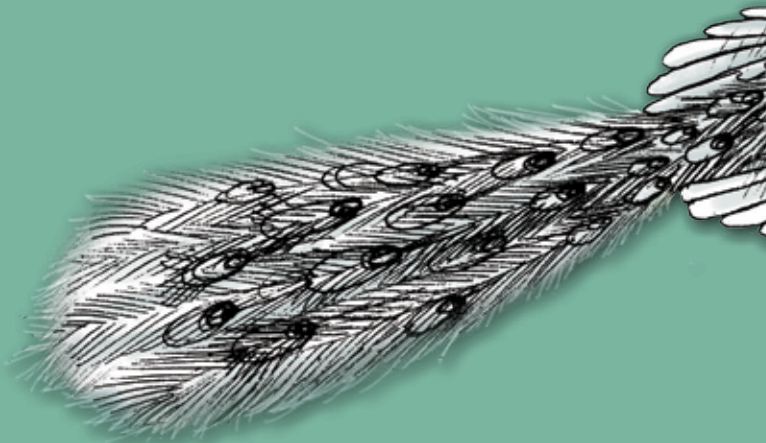


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