FAQ's

Give one example where waste can be converted to a useful product.

Plastic Wastes used in process:

The following types of waste plastic can be used in the construction of rural roads:

- Films (Carry Bags, Cups) thickness up to 60micron (PE, PP and PS)
- Hard foams (PS) any thickness
- Soft Foams (PE and PP) any thickness.
- Laminated Plastics thickness up to 60 micron (Aluminum coated also) packing materials used for biscuits, chocolates, etc.,
- Poly Vinyl Chloride (PVC) sheets or Flux sheets should not be used in any case.
- **Process Step 1:**
- Plastics waste (bags,cups,thermocole) made out of PE,PP and PS cut into a size between 2.36mm and 4.75mm using shredding machine, (PVC waste should be eliminated).

Process Step 2 a:

The aggregate mix is heated to 165°c (as per the HRS specification) and transferred to mixing chamber.

Process Step 2 b:

Simillarly the bitumen is to be heated upto a maximum of 160°c (HRS Specification) to have good binding and to preovent weak bonding. (Monitoring the temperature is very important).

Process Step 3:

At the mixing chamber, the shredded plastics waste is to be added. It get coated uniformly over the aggregate within 30 to 60 seconds, giving an oily look.

Process Step 4:

The plastics waste coated aggregate is mixed with got bitumen and the resulted mix is used for road construction. The road laying temperature is between 110°c to 120°c. The roller used is 8-ton capacity.

Characteristics of the process:

- Easy process without any new machinery
- Simple process without any industry involvement
- In situ process
- Use of lesser % of bitumen and thus savings on bitumen resource
- Use of plastics waste for a safe and eco-friendly process
- Both Mini Hot Mix Pland and Central Mixing Plant can be used
- Only aggregate is polymer coated and bitumen is not modified
- Use of 60/70 and 80/90 bitumen is possible
- No evolution of any toxic gases like dioxin
- Fly ash can also be used to give a better performance

How can an individual in his day to day activities help reduce pollution?

A List of Things You Can Do

Every action or inaction of any person has an effect on the environment—be it good, neutral, or negative. By becoming aware and doing the right thing, we choose to be part of the solution. Here are some things you can do:

- Stop smoking or don't throw your butts on the ground. Cigarette butts are not biodegradable and contain extremely toxic soluble chemicals. One butt thrown on the ground can remain for up to 25 years, leaking chemicals like arsenic, ammonia, acetone,

benzene, cadmium, formaldehyde, lead, and toluene into the environment.

- Drive an electric or hybrid car or at least one that uses unleaded gasoline.
- Keep your car in good running condition to avoid emissions.
- Share a ride or carpool.
- Choose to walk or ride a bicycle whenever possible.
- Never use open fires to dispose of waste, especially chemicals and plastic.
- Adopt the 3 Rs of solid waste management: reduce, reuse, and recycle.
- Use sustainable, reclaimed, or recycled building materials.
- Start composting leaves and clippings from your yard and food scraps from your kitchen to reduce waste while improving your soil.
- Use the power supplied abundantly and freely by wind and sun. Hang your laundry to dry to minimize your use of gas or electricity and open a window or put on a sweater rather than turning on the air conditioner or heater.
- Buy local foods and goods. In this manner, the use of fuel for transporting goods can be minimized.
- Look around you house or place of business for ways you could conserve water.
- Use and buy products that are eco-friendly or made with biodegradable materials. Avoid plastic.
- Always bring a bag when you shop.
- Get rid of your lawn: Plant bee-friendly, drought-tolerant, native plants instead.
- Plant more trees. They clean the air, provide oxygen, and beautify your surroundings.
- Take care to properly dispose of your pet's waste.
- Do not litter. Start an anti-litter campaign to educate your community.
- If you own a business, make sure you have considered the environmental impact of your business practices. If you work for someone else, take the time to assess your company's

environmental impact and try to implement positive change.
- Say a big "NO" to pesticides and GMOs (genetically modified organisms).

Define disaster.

A **disaster** is a serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

In contemporary academia, disasters are seen as the consequence of inappropriately managed risk. These risks are the product of a combination of both hazards and vulnerability. Hazards that strike in areas with low vulnerability will never become disasters, as in the case of uninhabited regions.

Developing countries suffer the greatest costs when a disaster hits – more than 95 percent of all deaths caused by hazards occur in developing countries, and losses due to natural hazards are 20 times greater (as a percentage of GDP) in developing countries than in industrialized countries.

Researchers have been studying disasters for more than a century, and for more than forty years disaster research. The studies reflect a common opinion when they argue that all disasters can be seen as being human-made, their reasoning being that human actions before the strike of the hazard can prevent it developing into a disaster. All disasters are hence the result of human failure to introduce appropriate disaster management measures. Hazards are routinely divided into natural or human-made, although complex disasters, where there is no single root cause, are more common in developing countries. A specific disaster may spawn a secondary disaster that increases the impact. A classic example is an

earthquake that causes a tsunami, resulting in coastal flooding.

What is disaster management?

The United Nations defines a disaster as a serious disruption of the functioning of a community or a society. Disasters involve widespread human, material, economic or environmental impacts, which exceed the ability of the affected community or society to cope using its own resources.

The Red Cross and Red Crescent societies define disaster management as the organisation and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disasters.

Types of disasters

There is no country that is immune from disaster, though vulnerability to disaster varies. There are four main types of disaster.

- Natural disasters: including floods, hurricanes, earthquakes and volcano eruptions that have immediate impacts on human health and secondary impacts causing further death and suffering from (for example) floods, landslides, fires, tsunamis.
- Environmental emergencies: including technological or industrial accidents, usually involving the production, use or transportation of hazardous material, and occur where these materials are produced, used or transported, and forest fires caused by humans.
- Complex emergencies: involving a break-down of authority, looting and attacks on strategic installations, including conflict situations and war.
- Pandemic emergencies: involving a sudden onset of contagious disease that affects health, disrupts

services and businesses, brings economic and social costs.

Any disaster can interrupt essential services, such as health care, electricity, water, sewage/garbage removal, transportation and communications. The interruption can seriously affect the health, social and economic networks of local communities and countries. Disasters have a major and long-lasting impact on people long after the immediate effect has been mitigated. Poorly planned relief activities can have a significant negative impact not only on the disaster victims but also on donors and relief agencies. So it is important that physical therapists join established programmes rather than attempting individual efforts.

Local, regional, national and international organisations are all involved in mounting a humanitarian response to disasters. Each will have a prepared disaster management plan. These plans cover prevention, preparedness, relief and recovery.

Disaster prevention

These are activities designed to provide permanent protection from disasters. Not all disasters, particularly natural disasters, can be prevented, but the risk of loss of life and injury can be mitigated with good evacuation plans, environmental planning and design standards. In January 2005, 168 Governments adopted a 10-year global plan for natural disaster risk reduction called the Hyogo Framework. It offers guiding principles, priorities for action, and practical means for achieving disaster resilience for vulnerable communities.

Disaster preparedness

These activities are designed to minimise loss of life and damage – for example by removing people and property from a threatened location and by facilitating timely and effective rescue, relief and rehabilitation. Preparedness is the main way of reducing the impact of disasters.

Community-based preparedness and management should be a high priority in physical therapy practice management.

Disaster relief

This is a coordinated multi-agency response to reduce the impact of a disaster and its long-term results. Relief activities include rescue, relocation, providing food and water, preventing disease and disability, repairing vital services such as telecommunications and transport, providing temporary shelter and emergency health care.

Disaster recovery

Once emergency needs have been met and the initial crisis is over, the people affected and the communities that support them are still vulnerable. Recovery activities include rebuilding infrastructure, health care and rehabilitation. These should blend with development activities, such as building human resources for health and developing policies and practices to avoid similar situations in future.