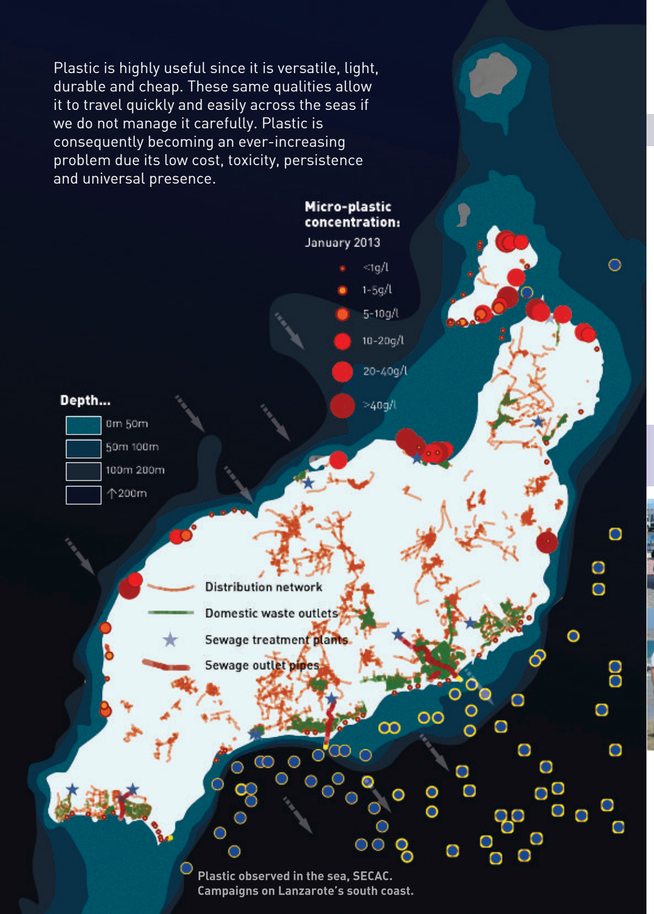
Plastic is highly useful since it is versatile, light, durable and cheap. These same qualities allow it to travel quickly and easily across the seas if we do not manage it carefully. Plastic is consequently becoming an ever-increasing problem due its low cost, toxicity, persistence and universal presence.



Plastic observed in the sea, SECAC.
Campaigns on Lanzarote's south coast.

COLLECTIVE RESPONSES
to a global problem

Solutions: Research, reduce, re-use, recycle.

- **Avoid** single-use products or those with a limited use like plastic cups, cutlery, sandwich bags, straws and razors, etc.
- **When shopping,** steer clear of over-packaged goods. Buy local, minimally-packaged produce. Use your own re-usable shopping bags or trolley. Refuse unnecessary plastic bags offered with purchases in shops.
- **Avoid purchasing** abrasive cosmetics that contain PEG plastics: facial scrubs, cleaning wipes, tooth-pastes, etc.
- **Recycle rubbish,** separating it according to the corresponding container.
- **Never discard** sanitary items, wipes or cotton swab sticks into the toilet.
- **Request** that your local shops and town offer a deposit-return system for bottles.

CLEAN-UP CAMPAIGNS ON LANZAROTE'S COAST. VOLUNTEERS. WHO'S ALREADY OUT TAKING ACTION?

Ayuntamientos
Cabildo de Lanzarote
CAS PASTINACA
Clandestino Surf
Clean Ocean Project
Lanzarote Limpia
Organismo Autónomo Parques Nacionales
Reserva Marina de la Graciosa
Senderismo Lanzarote
WWF Adena
Famara Limpia
COUP Cleaner Ocean Upcycling Productions

¡Agüita con el plástico!

ZERO PLASTIC CAMPAIGN - LANZAROTE RESERVA DE LA BIOSFERA

Join us – follow us on Facebook: "aguita con el plástico"
www.facebook.com/Aguitaconelplastico

Voluntary Participation for companies, etc:
If your company would like to get involved, show your commitment by signing up to "Agüita con el plástico"

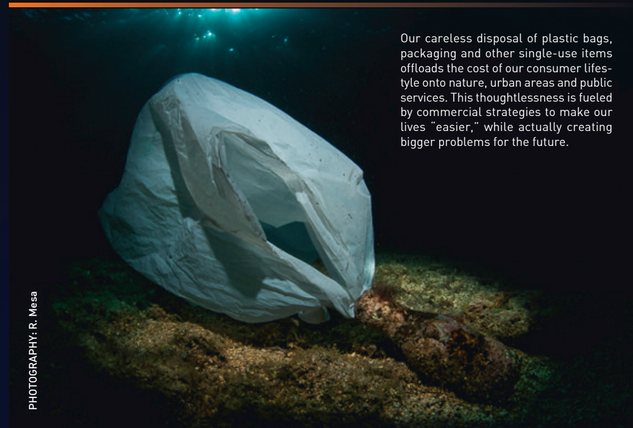
Diseño: www.fernandobarbarin.com / Translations: Melanie Symes, Calero Marinas

PLASTIC: A ROUND TRIP TICKET
...a disposable world?

A local diagnostic... *how are we affected?*

Macro ..... **Micro**

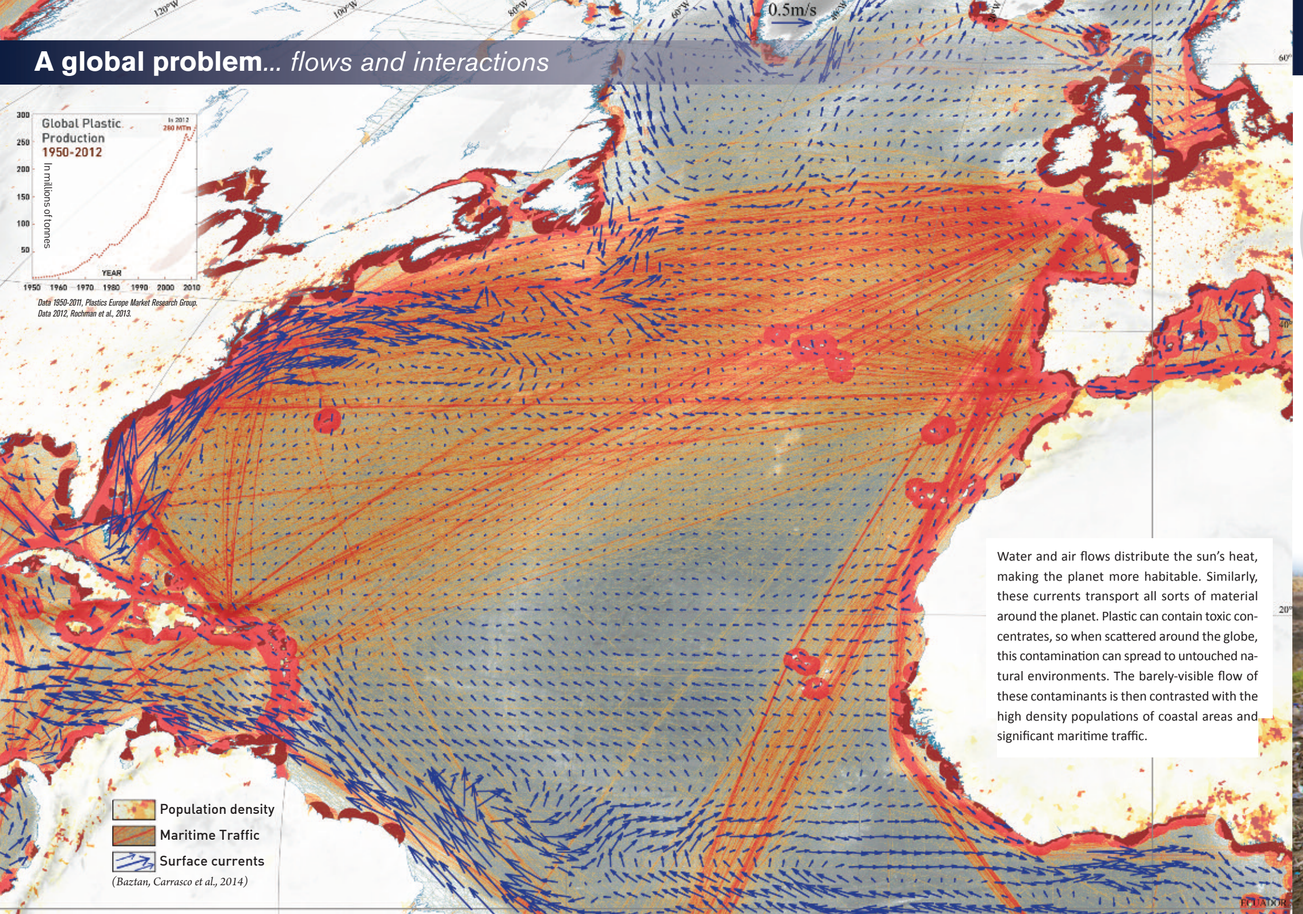
Plastic objects are photosensitive; they degrade progressively from larger parts (MACRO) to small fragments found on the coasts (MICRO). All are potentially toxic since they concentrate and transport Persistent Organic Pollutants. These fragments have revealed pesticides such as **dichloro-diphenytrichloroethane (DDTs)** (Ryan 2012; Heskett et al., 2012), together with trace **metals** which can be ingested by animals, thus entering the food chain. (Ashton et al., 2010).



Our careless disposal of plastic bags, packaging and other single-use items offloads the cost of our consumer lifestyle onto nature, urban areas and public services. This thoughtlessness is fueled by commercial strategies to make our lives "easier," while actually creating bigger problems for the future.

PHOTOGRAPHY: R. Mesa

A global problem... *flows and interactions*



Water and air flows distribute the sun's heat, making the planet more habitable. Similarly, these currents transport all sorts of material around the planet. Plastic can contain toxic concentrates, so when scattered around the globe, this contamination can spread to untouched natural environments. The barely-visible flow of these contaminants is then contrasted with the high density populations of coastal areas and significant maritime traffic.

Abandoned plastic: risks and consequences

Cetaceans and other marine mammals are victims of our dependence on plastic. When these magnificent creatures confuse plastic with food, they are unable to digest it, so it accumulates inside them and kills them by blocking their digestive system.

More than a third of "accidental" deaths in sea turtles are due to ingesting plastic. Beyond this, many others become fatally enmeshed in netting or plastic sheets.

Birds of all kinds become trapped in nets, bundles, and other plastic snares. Ingesting plastic is also lethal for birds, and for all animals.

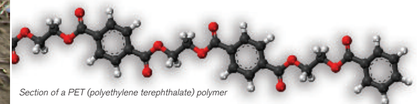
Oceans have absorbed the waste of humanity for centuries. Currently, plastics make up more than 60% of the debris that accumulates on beaches and coastlines.

Origin, types, uses and toxicity

In 1869, Wesley Hyatt created the first plastic: celluloid. Now there are more than twenty basic categories of polymers and over 17,000 different varieties of plastic, which makes recycling them difficult. Approximately 4% of all consumed oil and gas becomes the primary material for creating plastics and another 4% is used to generate the energy needed for plastic production.

Toxicity

A study published by Saido Katsuhiko's team in 2009 shows that plastics like **polystyrene** (PS) start to break down at 30ºC, producing highly toxic monomers. Plastic is not an inert material; components such as **Bisphenol A** (BPA) cause hormonal disruption associated with breast cancer (López-Carrillo et al., 2010), and **phthalates** can disrupt the hormonal development in babies (Swan et al., 2009).



Section of a PET (polyethylene terephthalate) polymer

In 1950, approximately 3,000,000 metric tonnes of plastic was produced. By 2012, annual production rose to over 280,000,000 metric tonnes. This is the situation today...