



Journey to Planet Earth

**Transcript for Episode 07:
Future Conditional**

Abridged Version

Journey to Planet Earth is produced by

**Screenscope, Inc.
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(Opening Montage)

Next on Journey to Planet Earth. Coping in a world of toxic pollution. The Arctic — a once pristine wilderness — under siege. Mexico — living in the shadow of tariff-free factories. Uzbekistan — caught between its silk road heritage and the realities of the 21st century. And the United States — a Latino neighborhood celebrates an environmental victory, while a sanctuary for biodiversity becomes a graveyard for millions of birds.

Please join us as Journey to Planet Earth investigates the global link between the release of toxic pollutants and the health of our planet.

(Arctic Montage)

The arctic is a place dominated by the rhythms of nature and the seasonal patterns of migration. It's a place of deep fiords teeming with life and remote fishing villages governed by the endless cycle of strong tidal currents.

(Inuit Town)

Most people who live here are Inuit, a nomadic people that migrated across a land bridge from Asia more than four thousand years ago.

(Tundra)

However, the image that most people have of the polar region, of a pristine unspoiled wilderness, is far from accurate. The Arctic, which has very few sources of industrial pollution, shows rising levels of the world's most hazardous chemicals: DDT, PCBs, dioxins, and mercury.

But where do these chemicals come from and how did they get here?

(Time Lapse of Clouds)

In a phenomenon scientists call the grasshopper effect, toxic pollutants released thousands of miles to the south evaporate in the warm climate then ride the winds until they reach the cold air of the Arctic where they eventually fall to the earth.

(Caribou)

It doesn't take long for the Caribou to feed upon the tainted moss and shrubs of the tundra.

(Seals and Polar Bear)

And in the sea, fish feed upon toxic plankton, which are then eaten by seals and polar bears.

Devra Davis
University of Pittsburgh Cancer Center

Polar bears are showing up with levels in their fat of certain toxic pollutants that would qualify them for burial in a hazardous waste site. Now, those polar bears don't work in factories, but what they do is they're at the top of the food chain -- full of a lot of hazardous material. This is clearly a cause for concern.

Polar bears are not the only ones at the top of the food chain.

(Seal Hunt)

Barney Kovic and his 13-year-old nephew Virgil are searching for ringed seals, one of the most abundant sea mammals in the polar region. Here in the arctic, hunting is far more than a sport, it's a necessity because the meat provides as much as 65 percent of the protein in the Inuit diet and most families simply can't afford the high cost of store bought food.

They finally spot a ringed seal. Barney signals for the boat to maneuver closer. His patience is finally rewarded.

(Skinning Seal)

This one seal will feed Barney's extended family for a week. But the discovery of toxic pollutants in the food supply has put 155,000 Inuits on the brink of a public health disaster.

Devra Davis

The women who eat these animals have no choice. They have to feed their babies. They don't have access to formula. And as a result the breast milk that they are giving their babies, a source of life and sustenance, is contaminated with some of the worse pollution we have ever see on this planet.

(Inuit Campsite)

For now, the Inuit who have contributed almost nothing to the contamination of their land remain unintentional victims. Their only hope is that communities to the south find ways to halt the spread of toxic pollution. As we will learn, that's not an easy task.

(Industrial Zone)

Four thousand miles from the Arctic in Tijuana, along the Mexican border with the United States, is a tariff-free industrial trade zone.

Thanks to NAFTA, these factories provide nearly 140,000 jobs for the people of Tijuana. But at what cost?

(Shanty Town)

In a valley just below the industrial park is Colonia Chilpancingo, a community of about 10,000. When it rains a nearby creek is flooded with chemical wastes from the industrial park. As this highly contaminated waterway weaves its way through the shantytown community it poisons everything and everyone in its path including the community's only source of water.

Over ninety percent of the children of Colonia Chilpancingo tested positive for elevated levels of lead in their blood --- an abnormally high number suffer from birth defects. For years, the community petitioned the Mexican government to clean up the site. Their pleas were always turned down, the six million dollars needed to stop the pollution was never made available. And the children, whose toxic playgrounds are less than a mile from the United States, are the innocent victims of a trade agreement that has no provision to force compliance with environmental laws. Even worse, the parents of these children have few choices other than to labor in the same factories that are poisoning their kids.

(Workers Heading Home)

Though their jobs pay about fifteen dollars for a ten-hour day they still cling to the dream of living in a healthier and better place. It's an optimism sparked by the recent success of a Latino community located just 17 miles away in one of California's largest and most affluent cities.

(San Diego Skyline)

San Diego has always been a popular sailing and tourist destination. But what tourists never see is Barrio Logan. This is one of San Diego's poorest Mexican-American communities.

Each day hundreds of diesel trucks, nearly 300,000 cars and dozens of factories operate in and around this residential neighborhood.

Paula Forbis
Environmental Health Coalition

The studies have been done across the country showing that people of color and low-income communities are much more subject to being the targets of industrial sources moving into those neighborhoods than into other neighborhoods. This has resulted in a variety of health impacts -- 20 percent of the children in Barrio Logan have either asthma or probable asthma.

(Master Plating)

The failing health of the children sparked a community protest. They went after Master Plating, a factory located in the residential heart of Barrio Logan that used hexavalent chromium, a known cancer-causing chemical.

(Montage of News Reports)

Now! This is 10 News Nightcast.

Local television stations documented the community's fight.

Dangerous toxins are raising the risk of cancer for people who live in Barrio Logan

You cannot see it, you can't smell it, but it can kill you. It's called Hexavalent Chromium.

What we're trying to do now is to take the proper enforcement actions against the violation, which in this case is Master Plating.

The company blamed for causing the pollution is being shut down.

This is what good politics is, you know, community and our representatives, everybody. This is what it means to finally get something done, working together.

(Celebration)

A few days after Master Plating closed down the people of Barrio Logan gathered to celebrate.

Paula Forbis

We're happy to report that there will be a 75 percent decrease in chrome levels at the houses around Master Plating and that results in a much less of a cancer risk to residents in this immediate area.

Barrio Logan's achievements may also serve as a wake-up call for a desert resort community located less than 150 miles away.

(Palm Springs)

On most Thursday afternoons, thousands crowd the streets of Palm Springs' weekly outdoor market. It's hard to believe that this city of 40,000 has anything in common with the Latino communities along the border or the Inuit villages in the Arctic. This is a place where children do not suffer from the effects of industrial pollution or a contaminated food chain. Yet within a few years, Palm Springs may be at the center of a serious public health emergency.

(Desert and Salton Sea)

Forty miles to the south and rising out of a harsh brown landscape is a vast body of water called the Salton Sea. It seems almost too good to be true, an inland lake in the middle of the desert. This is California's crown jewel of biodiversity, a sanctuary for millions of migrating waterfowl.

(Salt Flats)

But as recently as 100 years ago, there was no water here. It was a huge dried out salt basin, the remains of ancient lakes that over time, evaporated into the desert air.

(Salton Sea)

Today, this is the largest inland body of water in California. For four months temperatures soar above 100 degrees. Over six feet of water is lost to evaporation every year. But unlike the lakes of ancient times, it hasn't dried up.

Tom Kirk

This Salton Sea is very different than those previous Salton Seas. It's not this great lake that becomes massive and dries up, and massive and dries up. It's a lake that's largely sustained by man's activities, particularly agriculture.

(Agriculture)

Five hundred thousand acres of rich farmland carpet the neighboring Imperial and Coachella Valleys. Once a desert wasteland, today these farms provide nearly eighty-five percent of the nation's winter vegetable crop. What makes this billion-dollar industry possible is Colorado River water, enough water to satisfy the yearly needs of a city of 24 million.

(Visualization)

An enhanced satellite photograph shows a landlocked Salton Sea. Surrounded by mountains and desert, the green areas to the north and south are irrigated agricultural development. These farms are the source of drain water that keeps the sea from drying up. But it's a resource that presents a major paradox.

(Waste Water)

What feeds the Salton Sea is slowly killing it. The agricultural drain water contains enormous amounts of salt and chemicals. Over the years, it has become twenty-five percent saltier than the ocean. Several decades ago, the sea's ecosystem began to suffer.

(Dead Birds and Fish)

In the 1980s, outbreaks of botulism and algae blooms killed millions of fish. And then, the birds began to die. Though the exact cause remains unknown most scientists believe the dead birds fed on tainted fish.

(Dead Birds)

Today, the biggest fear is that if the sea gets saltier it won't be able to support any life.

Though recent tests indicate that the salinity of the Sea is still low enough for fish to reproduce there exists another serious threat.

(Irrigation and Farming)

In an historic agreement, farmers have agreed to sell to San Diego county enough water to satisfy the needs of 2 million people each year.

Ted Schade
Great Basin Unified Air Pollution Control District

One of the things that I'm concerned about with the Salton Sea is that as the flows into the sea are reduced, the sea will get smaller. And as the sea gets smaller, lakebed will be exposed. Estimates are somewhere between 70 and 100 square miles of lakebed won't be covered with water anymore.

What exactly are the consequences of an inland sea drying up? Should the people living near the Salton Sea be concerned? And what can we learn from an event that happened 7,000 miles and a world away from California?

(Barren desert)

Here, in a remote corner of Uzbekistan, in Central Asia, the nearest body of water is almost 90 miles away.

(Rusted boats)

Yet, in this seemingly uninhabited wilderness, there exists an extraordinary sight, a vast graveyard of boats in the middle of the desert. These are the abandoned skeletons of a once proud and prosperous fishing fleet.

(Archival footage)

Today the ruins are a reminder that forty years ago these sand dunes were covered by an ocean of fresh water. How could this happen? How could the world's fourth largest inland body of water, the Aral Sea, become the site of what the United Nations calls man's greatest ecological disaster? And what does this tell us about the future of the Salton Sea?

(Tashkent)

Tashkent is Uzbekistan's capital. Home to nearly 3 million people, this is Central Asia's most modern city. Tashkent's wide avenues are a gift from the country's most recent conqueror -- the Soviet Union. Though the Soviets have been gone since 1991, they left behind a legacy based on their demand that Uzbekistan become a major producer of cotton.

(Construction)

In the early 1960s, engineers from the Soviet Union devised an ambitious program. They decided to reshape the desert, to turn sand into cotton, to help save the Soviet's failing economy. Within a decade, Uzbekistan became the world's second-largest producer of cotton. But that was when the country's largest river, the Amu Darya, was an untapped source of water.

(Dry River)

Today the lower Amu Darya has been sucked dry by upstream cotton farms. Deprived of water, river traffic is non-existent. Abandoned cargo boats litter the shoreline, mute testimony to a misguided agricultural policy. And a river, once wider than the Mississippi, never reaches its natural destination, the Aral Sea.

(Computer Image)

Computer images based on satellite data document the event. As an expanding cotton industry consumed almost all the water flowing into the Aral Sea, it began to shrink. In just over three decades an ancient and thriving ecosystem was half its original size.

(Wind Storm)

Every year windstorms sweep across the exposed seabed picking up millions of tons of toxic salt and the residue of agricultural chemicals, including DDT. This legacy of the cotton industry has left behind the planet's highest concentration of air-borne pollutants. Villages are covered with lethal dust, surface water and communal wells are contaminated. The most seriously affected are women and young children.

(Hospital)

Dr Oral Ataniyazova is the Director of the Center for Human Reproduction and Family Planning. She and her staff are trying to cope with an unprecedented environmental crisis.

Twenty-five years of contaminated water and air are taking a toll. Ninety per cent of pregnant women suffer from anemia. Not unlike the Inuit of the arctic, their breast milk contains high levels of agricultural chemicals. The effect on infants is devastating. Five percent of newborns have birth defects, ten percent will die before their first birthday.

Oral Ataniyazova

I think the Aral Sea crisis is one of the dramatic examples of what could be happen if the environment and irrigation system is mismanaged.

And for the people of Uzbekistan the death of the Aral Sea has become a never ending nightmare.

(Desert/Palm Springs)

Though most scientists have concluded that it's too late to save the Aral Sea it does serve as a graphic warning for the people of Palm Springs.

(Receding Salton Sea)

As the Salton Sea begins to recede toxic dust storms will inevitably come off the dried-out lakebed. Despite this danger, the transfer of water to San Diego has gone forward without an agreed upon plan or even adequate funds to remedy the situation.

Tom Kirk
Salton Sea Authority

The Salton Sea, while it's California's largest lake it's in this corner of California that people don't pay a lot of attention to. Unfortunately, those folks that don't pay a lot of attention to it today may have to in the future as the sea recedes and we have these environmental problems increasingly, that's going to directly affect their lives. And they may not be concerned about the 400 species of birds here. They may not be concerned about the prolific fishery, but when the Salton Sea starts affecting human health in the Coachella and Imperial Valleys, they better care.

(Closing Montage)

Though there are no easy answers or quick solutions to severe environmental problems, we now know that it's necessary to strike a balance between economic development and what nature can safely provide.

We also know that many communities are struggling with forces well beyond their control.

Though separated by distance and culture, in the end the health of those living in places like the Arctic and Barrio Logan cannot be separated from those living in Colonia Chilpancingo, Uzbekistan, and Palm Springs.

This new reality presents us with enormous challenges for the future, a future, conditional on providing new ideas, new attitudes, new hope. Planet Earth, this is our home. This is where our journey of discovery must begin.

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