

PEOPLE COUNT: HEADS UP

TC	VISUAL	DIALOGUE
00:58:10	BARS	
00:59:15	TITLE	
01:00:00	EASTER ISLAND STATUES B-ROLL	JANE V/O: Facing our fears about other future... Are these stone statues from the past a key to that challenge? And what bone-chilling lessons can we learn from their creators?
00:16	PEOPLE COUNT INTRO	
00:37	WS JANE IN STUDIO SEATED	JANE O/C: Hi... I'm Jane Fonda. Welcome to People Count. It's said history has a way of repeating itself... And sometimes it does, with tragic consequences. From wars to environmental disasters.... The human race has often repeated its past mistakes. Will rapid population growth be another repeated mistake?
00:59	MS JANE	JANE O/C: There are some who say there's nothing to repeat, since only recently have our numbers soared dramatically. And from a "global" perspective, that's true. It did take the world until 19-27 to reach a population of two billion. But then it took just 30 years to reach three billion... 14 years to

four billion... 13 years to five.

And after just 12 years, in 19-99, we hit the six-billion mark.

01:30WS JANE SEATED

JANE O/C: So while "global" population growth is recent, dig a little deeper in your history books, and you'll find an ancient civilization that experienced rapid population growth, and barely survived.

01:42B-ROLL BARBARA TAKING PHOTOS AT EASTER ISLAND

JANE V/O: Photojournalist and filmmaker Barbara Pyle takes us 23-hundred miles off the coast of Chile, to Easter Island... and island known for its huge stone statues, tragic history, and unsolved mysteries.

02:04B-ROLL OF ISLAND

BARBARA V/O: It's the most isolated island in the world... surrounded on all sides by thousands of miles of ocean. But looks can be deceiving. Despite its isolation... on Easter Island, you're never alone.

02:20STATUES MONTAGE

There's always something looming in the darkness, watching in silence.

02:30BARBARA TAKING PHOTOS THEN STILLS OF STATUES

Giant statues, called moais, weighing up to 100 tons, are everywhere on easter island.... One-thousand in all.

The creators: An ancient polynesian people, who landed on the island

around 1600 years ago.

02:44	Why did they build these gigantic monoliths?
02:44WS FROM HELICOPTER	That's one of the island's oldest unsolved mysteries.
02:51B-ROLL OF STATUES	Many of the islanders believe they were made in the image of family members.
02:56ME SERGIO BY STATUES	SERGIO O/C: The statues are representation of ancestors.
03:00B-ROLL SERGIO WALKKING	BARBARA V/O: Sergio Rapu is a descendent of the original easter islanders, known as the Rapa Nui. It's his Rapa Nui ancestors he sees in the faces of the moai.
03:11	SERGIO V/O: You can imagine when you're coming out of a village, of a house, and you walk out in front of the ancestor figure... it's like looking to your grandfathers.
03:23MS SERGIO	All what you feel is SERGIO O/C: respect to them whether you like it or not.
03:27W/S BARBARA & SERGIO TALKING	BARBARA V/O: It's this respect for his ancestors that fuels Sergio's desire to find out their history... their entire history.
03:35B-ROLL OF HER BOOTS & WALKING BY STATUES	BARBARA V/O: Which includes this island's second unsolved mystery.... A question

03:58 BARBARA WALKS W/ LORET      that is much more sinister... With more frightening implications. The Rapa Nui population, once booming at 20-thousand, plummeted to a fraction of that in the early 18-th century. What happened? Doctor John Loret is a New York scientist and leader of a four year expedition to Easter Island. He starts from the beginning in unraveling this mystery.

04:06 MS LORET      LORET O/C: The geology was here first, then the plants and the vegetation, and then finally the people. So we have to study it from all aspects, and that will tell us the full story.

04:18 STILLS OF LORET      BARBARA V/O: Dr. Loret's interest in Easter Island is not new. It goes all the way back to a 19-55 expedition. It was then he met a young boy with a shared passion.

04:31 MS OF LORET      LORET V/O: Sergio was a little boy when I was on the island, he was about 6 years old

04:35 MS SERGIO      SERGIO O/C: We have many things in common, and Easter Island is a great laboratory where we both can . . .

04:48 STILLS OF SERGIO & LORET      V/O: invite numerous specialists to answer the human history and the

natural history of this island.

04:48

BARBARA V/O: 40 years after the 19-55 expedition, Sergio and Dr. Loret are reunited... as old friends, and peers. Sergio is now a trained archaeologist... and will lend his expert advise to Dr. Loret and his research team...

05:08B-ROLL OF LORET & SERGIO

LORET V/O: Sergio is dedicated to the island's future. That's why I'm working very closely with him. He's one of the best people on the island to work with.

05:15SCIENTISTS IN FIELD

BARBARA V/O: Dr. Loret also surrounds himself with a number of other scientific experts, including geologists and plant ecologists....

And all of them share the same objective: Finding out what caused the Rapa Nui people to virtually disappear in the early 16th century.

05:35STILLS OF DAN

BARBARA V/O: Dan Mann is a team geologist.

05:40MS OF DAN

DAN O/C: The most simple hypotheses is kind of eating themselves out of house and home... which is simple exponential human population growth that used up all the resources and people basically crashed... the population crashed.

05:55GRAPHIC SIMULATION

BARBARA V/O: Simple exponential population growth is a steady, rapid increase in the number of people in a limited environment.

For example, if a couple has six children, and those children have six children of their own... then there would be 36 grandchildren...

If those grandchildren followed suit... they would have a total of 216 children... a 100-fold increase in population in just four generations.

06:24B-ROLL BARBARA WALKS

On Easter Island, where the resources are limited, that kind of growth could have proved disastrous.

06:36WS DAN AT EXCAVATION

Dan suspects that clues to the Island's past are stuck in the mud. And, that's exactly where we found him the next day.

06:39BARBARA APPROACHES

BARBARA O/C: Hey, how's it going?

DAN O/C: Hi Barbara... How are you?

06:43MS OF DAN

DAN O/C: The island went through a period of tremendous ecological change... so it really was an eco disaster.

CU OF EXCAVATION FINDINGS V/O: The early Rapu Nuis cleared the trees.. thought to have been oh 100 feet tall. They're these magnificent trees.

And they're totally extinct now.

06:55 EXCAVATION SITE THEN OCEAN

DAN V/O: What you're looking at is intensive soil erosion, so we've lost a lot of top soil and that's basically because the Rapa Nui cleared the forest, and everything was washed away in the rain.

07:11 TREE CLEARING VIDEO

BARBARA V/O: The Rapa Nui aren't the only people to make this critical mistake. Countries all over the world are still leveling their forests. Almost half of earth's original forest cover is gone... much of it destroyed with the past three decades.

Over the last 50 years, 12-percent of the planets' soils have been severely damaged.... An area that would equal the size of China and India combined.

07:41 B-ROLL OF CLEARED FORESTS In the US

alone, 90-percent of old growth forests have been cut down.

For the Rapa Nui, cutting down trees didn't go unnoticed... Even at the dinner table.

Trees were an important food source, producing nuts and syrups.

And without wood, the Rapa Nui could no longer

build canoes to deep-sea fish... Or even to escape the island altogether.

08:03MS OF DAN

DAN O/C: The question is, did the timing of the forest clearance coincide with the timing of the people crash of the people. And the idea being that they basically mined all the trees, and ate themselves out of house and home.

08:17SHOT OF DESERT

BARBARA V/O: The Rapa Nui also made mistakes when it came to their farmland.

Their slash and burn farming techniques depleted the soil of nutrients and made crops more difficult to grow ... to feed a growing population.

08:33MS OF SERGIO

SERGIO O/C: I think the population was an important factor in bringing this culture to a collapse. The resources available, on the one hand, was every time more limited simply because population grows and grows.. and as population grows, forests were cut, land was cultivated. There's more intense use of that land for feeding the people.

09:02ISLAND SHOTS

BARBARA V/O: That was a burden Easter Island couldn't handle.

09:06MONTAGE OF CITY LIFE

The carrying capacity of a country is the number of people



it can support without  
degrading its  
environment.

09:13MONTAGE OF STATUES

By the year ----, Easter  
Island's carrying  
capacity was on overload,  
with ----- people relying  
on its limited resources.

As the Rapa Nui were  
burning out their  
island... archaeologists  
believe they became  
obsessed with building  
Moais.

Rival clans made as many  
as they could... as big  
as they could.

09:33MS OF LORET

LORET O/C: Maybe they built  
large statues thinking  
that would please the  
gods. Biggest statues  
would be, they'd be more  
pleased with it. But  
they found out it didn't  
work.

09:41SHOTS OF MOAIS

LORET V/O: It reached a point  
when they couldn't  
support them any longer.  
I mean to cut these  
statues, you could see, I  
mean it would have  
required thousands of  
people. And to move  
them, thousands of people  
again. So you had to  
feed all these people.

09:58MS JOHN

O/C: So eventually the work  
had to stop.

10:00MS DAN

DAN O/C: Probably the Moai  
themselves were the focus  
of kind of a last ditch  
attempt of these people  
to control what was

MOAIS B-ROLL

happening to them. So perhaps, there's some analogies ... where people who are at the end of their rope seize on the last possible straw, and it's usually some spiritual kind of savior.

10:19NATIVE MUSIC

BARBARA V/O: The Moais didn't save them... and as food became increasingly scarce... fighting broke out between clans, with the losers often becoming victims of cannibalism.

10:32MS SERGIO

SERGIO O/C: If you have few people, they may survive in a situation of famine. But if you have a densely populated island, then there's no sufficient food to let these people survive. So stealing food from the neighbors will start skirmish, revenge, and cannibalism.

10:57ISLAND SHOTS

BARBARA V/O: So what was the final crushing blow to the Rapa Nui?

Scientists suspect the culprit may have been climate change.

11:14MS DAN

DAN O/C: It might have been a scenario, something like human population went up towards the carrying capacity that the island could support and then we had a slight fluctuation in climate... maybe a drought for a few years... and it produced

chaos, because suddenly we had people starving.

11:30MOAI SHOTS

BARBARA V/O: What climatic event could cause such chaos?

It's a household word these days... The infamous "El Nino".

11:38GRAPHICS

El Ninos are warm ocean currents that form periodically in the Pacific Ocean.

11:46DISASTER VICTIMS B-ROLL

The warm water can contribute to erratic weather patterns around the world, by making some areas too dry, and others too wet.

11:54UNDERWATER EXCAVATION

The research team on Easter Island suits up to find evidence of an El Nino event in ancient coral heads.

11:59

MS LORET

LORET V/O: We're able to obtain a six-foot core (CUT) which it represents about 500 years in time, and we can look at by doing x-rays and even using black light, O/C: we can tell El Nino phenomenon as it occurred back in time.

12:14UNDERWATER EXCAVATION

BARBARA V/O: The core samples record a time line of weather events, very much like looking at the rings of a tree.

12:20MS OF LORET

LORET O/C: These reoccurring, El Nino episodes have impacted tremendously on world population.

12:28 WEATHER DISASTER B-ROLL

BARBARA V/O: One of the biggest impacts came in 19-82 and '83, when a powerful El Nino triggered typhoons over Hawaii and Tahiti, monsoon rains over the central Pacific, and widespread flooding over the southern United States.

The cost to the world economy: Eight billion dollars.

The human suffering was immeasurable.

12:58 SKY SHOTS THEN EASTER ISLAND

A new study indicates human-induced climate change could make future el ninos even more intense, and more dangerous.

13:01

DAN V/O: We're all very concerned about climate change.

13:04 MS DAN

DAN O/C: Human-caused global warming is the result of the release of large amounts of C O 2

13:10 MONTAGE OF EXHAUST EMISSIONS

and trace gases like methane into the atmosphere by especially industrialized countries like the United States. And that's creating the greenhouse effect, which

13:32 MS DAN

O/C: is trapping heat on or near the surface of the planet, and raising temperatures. Now that all sounds very simple... but in fact, it has very unpredictable effects within the climate

system.

13:47B-ROLL OF FOLOODING

BARBARA V/O: And that unpredictability could intensify storms, and cause seas to rise.... Small, low-lying islands like the Maldives would suffer the most, with some going under water completely.

13:59ESATER ISLAND SHOTS

Easter Island's high elevation would help protect it from sea level rise... But many of the Moais would be threatened.

14:05MS OF DAN

DAN O/C: If sea level comes up a meter or so, we are just going to have more salt spray, and we'll have more weathering and the statues could disappear even faster.

14:14B-ROLL OF SERGIO

BARBARA V/O: Sergio is leading an effort to restore moais that have been destroyed from weathering, age, or tribal warfare.

Each restoration is a painstaking process....

14:25MOAI RESTORATION B-ROLL

This Moai's head fell off.

Before Sergio can re-attach it, he has to measure how much rock has eroded away between the two pieces.

Manipulating the original head to find that out is dangerous, because of its tremendous weight.

So a new technique is used.

14:50B-ROLL OF HAROLD

Creating a mold... a fake head, so to speak... which is much lighter and easier to move than the real head.

Sergio has brought in an artist from Chile to handle the job: Harold Krasell.

14:57

SERGIO V/O: To handle the casting of the head of the moai, we needed somebody who is expert, sensitive... not only in making the mold, but also thinking like sculptors, because the ancient people were also sculptors.

Harold Crasell is a great man. He is a good craftsman, artist, sculptor.

15:19STILL OF HAROLD

15:24MS OF HAROLD

WS RESTORATION SITE

HAROLD O/C: This the mold. We took the mold from the original head in order to have our cast of it. And with the cast, we're going to fit the head to the body.

15:40MONTAGE OF RESTORATION

BARBARA V/O: There she goes Harold!!!

15:48

SERGIO V/O: In the case of this Moai that we're working on the head lost about 8 inches.

15:56MS SERGIO

SERGIO O/C: When we restore them, we try to restore not only the piece of stone, but we restore it with feeling.

16:03B-ROLL SERGIO

BARBARA V/O: For Sergio, restoring the moais is not just putting pieces of a stone together... but a way to reclaim a culture that has also fallen into disrepair.

16:16STILLS OF ISLANDERS

SERGIO V/O: We need to train the young Rapa Nui to involve in the restoration of their own monuments. In that way they learn, they preserve the language, the tradition, the dancing, the music.

16:27

BARBARA V/O: Only 20 years ago, 70-percent of Easter Island's children spoke the Rapa Nui language... Now only five-percent do.

B-ROLL OF ELDERS

The elders of Easter Island are also working to ensure their ancient culture doesn't die out.

16:49INTERVIEW WITH 2 ELDERS  
MAN SPEAKS IN NATIVE LANGUAGE

TRANSLATOR V/O: What we are doing today is studying the Rapa Nui language.

We have almost finished learning all the grammar and we have compiled a dictionary. But we need to be able to publish all the paperwork. We are looking for help to get all the proper computers

and other technical help.

17:09SECOND ELDER SPEAKS

TRANSLATOR V/O: Our cultural heritage is of great value and our children need to learn more about it. We are still very weak in preserving our culture.

17:18B-ROLL HULA DANCERS

BARBARA V/O: Yet Rapa Nui dancing is very much alive.

17:30LORET DANCES THE HULA

While Dr. Loret makes an admirable attempt to learn the moves... He's much more successful at gathering clues about the fate of the Rapa Nui ancestors.

17:45EXCAVATION BY RIVERSIDE

He lets Dan do the honors... Extracting a sizeable soil sample of the bottom of an ancient volcanic crater.

17:53MS DAN

DAN O/C: We're trying to reconstruct vegetation history... because vegetation is a proxy for climate.

18:00B-ROLL EXCAVATION

BARBARA V/O: By looking at the soil layers, the scientists can see what climate and plant life existed at various points in history.

One ancient layer they've uncovered has been extremely unexpected.

18:11MS OF LORET

LORET O/C: We found a layer, for example, that's completely upset us all. Just nothing but



beetles. Complete layer, inches of beetles in the core, and maybe about 8 thousand years ago. So we don't know. Were beetles dominant and ate everything else? We're not sure.

18:26 SCIENTISTS DIGGING

B-ROLL OF PARAPLANE'S VIDEOS

BARBARA V/O: While the geologists dig through the earth... another group of scientists takes to the skies for a bird's eye look at the island:

18:34

LORET V/O: We took up us a paraplane which has the ability to fly at low speeds at low attitudes which is good for photography. We were able to see features that we didn't know existed.

18:46 MS DAN

DAN O/C: It's very sobering to see this place. When you start digging around and you notice the statues and you look at the soils, and you start realizing what once was here.

18:55 B-ROLL ISLAND

V/O: It's probably the same thing as if you went to the scene of a nuclear bomb. I mean this is incredible devastation... and it's somehow related to humans.

19:08

BARBARA V/O: When the Rapa Nui were stressed to their limit... did an El Nino make a bad situation even worse?

19:16 B-ROLL OF LORET

Dr. Loret says his team needs to do more work with the coral

beds and soil samples before they have that answer.

But early studies indicate an El Nino did devastate the island....

He is hoping to return to Easter Island... a place he insists can give us invaluable information.

19:30MS OF LORET

LORET O/C: Easter Island is a microcosm of what we're doing to planet earth.

19:34 ISLAND B-ROLL

LORET V/O: We have to modify our lifestyles completely...

B-ROLL AGRICULTURE TECHNOLOGY We're already running short of water in many places. We're looking to technology to really solve the problems for food production.

MS JOHN O/C: But we can't keep up with population. When you look at the world... not just from the United States standpoint... but from.... I mean a lot of people are starving to death.

19:55MS OF DAN

DAN O/C: We know what the problem is, but we also have to figure out how we can effectively start to solve the problem in a way in which it will work. And this has to be an effort which is supported, totally backed by the power, which is the economy...

20:16 INDUSTRY MONTAGE

V/O: which is industry and the consumer. People have to take

responsibility for their personal lives and their energy use... and their use of resources, and on, and on and on.

20:30MS OF DAN

DAN O/C: So it has to be, the whole system has to react to the threat... and we can imagine here on Easter Island, for some reason, they weren't able to do that.

Rapa Nui isn't some weirdo little island in the South Pacific. (cut) There are lessons here, and they're very frightening when applied to the larger world.

20:46B-ROLL SERGIO WALKING

BARBARA V/O: Sergio believes the moais are crucial to keeping those lessons in the minds of future generations around the world.

20:55B-ROLL SERGIO AT CAFE

What we have gone through here ... over population, scarcity of resources, and damaging our environment, is the best lesson we can pass.

21:08

BARBARA V/O: If the moai could talk, what do you think they'd say?

21:09

SERGIO V/O: Why we cut down all the trees of this island? Why we didn't think more before we damage our environment?

21:22MOAI RESTORATION B-ROLL

BARBARA V/O: Though this moai can't talk... Sergio is

bringing it back to life.

After months of meticulous work, this moai's original head is about to be fitted onto its body.

Some of the best teachers on the island are thrilled to help Sergio on this momentous occasion.

21:40MS ELDER SPEAKING

TRANSLATOR V/O: We want it to last forever. We want to preserve the Rapa Nui heritage...

21:50MS SERGIO

SERGIO O/C: We're restoring only part of the past. We cannot really bring every information back. But the most important of this restoration work is to allow the living people of today appreciate more the ancestor work and this heritage we've had. It is not any longer just our heritage. We share with entire world.

22:12RESTORATION B-ROLL & STILLS

BARBARA V/O: Sergio hopes to eventually restore all the moais.

22:36WS BARBARA & SERGIO

BARBARA O/C: It would be a great dream to have all of them restored.

22:38MS SERGIO

SERGIO O/C: It would be a fantastic feeling. You come to Easter Island, you'll feel like in an open air museum.

B-ROLL OF HEAD ATTACHMENT SERGIO V/O: It would be mute testimony to the

past...but its there, you  
can vibrate with it.

22:50 BARBARA TAKING PHOTO

BARBARA O/C: What a face!

22:53

SERGIO V/O: What a beautiful  
him!

22:54 JANE IN STUDIO

JANE O/C: Will the mistakes  
of Sergio's ancestors be  
repeated?

Or will we learn from  
them, and possibly avoid  
the same fate?

The similarities between  
Easter Island and today's  
world "are" remarkable.

We, too, are reproducing  
at an unsustainable rate.

The global population  
grows each year by 80-  
million.

That's the equivalent of  
the population of Mexico  
every year.

23:23 WS JANE SEATED

JANE O/C: And nearly all the  
increase is happening in  
developing countries.

Developed countries play  
a part as well.

Particularly the United  
States, were the average  
consumer-hungry citizen  
has an environmental  
impact 30 to 50 times  
greater than the average  
citizen of a developing  
country like India.

Directly or indirectly,  
each U S resident

consumes his or her body weight in primary resources every day... including oil, coal, agricultural and forest products.

23:56 ADDRESS SCREEN

JANE V/O: If you want more information about population growth, over-consumption, and their consequences, write:

The Population Institute  
1-0-7 2nd Street,  
Northeast  
Washington, D-C  
U-S-A 2-0-0-0-2

And if you want more information about Easter Island, write us at:

People Count  
Turner Environment  
Division  
One C-N-N Center, Six  
North  
Atlanta, Georgia  
U-S-A 3-0-3-0-3

24:25 WS JANE SEATED

I'm Jane Fonda.  
Thanks for joining us, on our worldwide journey.... Proving once again that the actions of all people count.

24:39 ENDING CREDITS

25:47 "MOVE THE MONEY" AD

01:26:18 END OF TAPE