

21ST CENTURY SHOW # 40

SHOW OPEN AND MUSIC (16.00”)

Coming up on 21st Century... (2.00”)

[BHUTAN – TSUNAMI FROM THE SKY]

They call it the tsunami from the sky ... (SOUNDBITE: “As the old Bhutanese saying goes “Your real enemy is fire or water”)... Bhutan’s fight for survival. (11.65”)

[KENYA - WILDERNURSE]

In Kenya, call the emergency doctor – a wild animal is hurt: (Sound up: “With a black rhino you expect anything.”) The man who risked all to save Africa’s wildlife. (12.14”)

ANCHOR INTRO #1 (24.76”)

Hello and welcome to 21st Century. I’m Daljit Dhaliwal.

[BHUTAN INTRO]

We all know that climate change is causing the polar ice-cap to shrink, threatening small islands with extinction and devastating populations with drought. But how many of us have heard of a tsunami from the sky? That is what is threatening one small Himalayan country, Bhutan. We take you there.

SCRIPT – SEGMENT # 1 (13'33")

Bhutan: Tsunami from the Sky

<u>Video</u>	<u>AUDIO</u>
MISTY MOVING CLOUDS OVER LANDSCAPE	MUSIC
BEAUTIFUL LANDSCAPE SHOTS	<u>NARRATION:</u> Some call it the lost Shangri-la – others the land of the Thunder Dragon. (9.10") For centuries, the tiny Himalayan kingdom of Bhutan has been cloaked in mysteries as dense as the clouds that swirl around its towering peaks. (10.21")
BUDDISTS CROSSING LANDSCAPES	Until the 1970s, the borders of this deeply Buddhist country were closed to outsiders. (7.37") <i>(NAT SOUND: PRAYER WHEEL RINGING)</i>
CARVED GREEN VALLEYS	Today, in the lush valleys carved out of the majestic mountains, live a people whose traditions remain uniquely intact in our globalized world. (10.63")
STREET SCENES TIMPHU	Even in the urban environment of Bhutan's capital city, Thimphu, national costume is the preferred dress for most. (8.09")

SCHOOL CHILDREN IN
GARDENS

And school children learn how to preserve the environment from an early age, starting their days in class-gardens rather than classrooms. (8.94”)

ARCHERY FIELD

Bhutan stands alone as the only country in the world where the Gross National Happiness of its people is deemed more important by its leaders than the Gross Domestic Product. (11.69”)

(NAT SOUND: SINGING FROM ARCHERS)

SHOT OF VILLAGE IN
MOUNTAINS

But high up in the mountains lurks a danger that could destroy this harmonious people and the lifestyles they have always enjoyed. People like 76-year-old Dzongpon Ugey. Like most of the Bhutanese population, he has lived off the land, for the last 53 years, in this fertile valley of the Pho Chu river, in north western Bhutan. (22.93”)

INTRO OF DZONGPON UGEY

DZONGPON UGEY: (In Dzongkha)

RIVER

“My income is from agriculture only, and no other source.” (4.27”)

UGEY ON CAMERA

“Rice, wheat, cabbage and chilies. We feed ourselves and sell the surplus.” 6.34”)

NARRATION:

Now all this is threatened. Beyond

ZOOM INTO MOUNTAINS AND
GLACIERS

Dzongpon Ugey's house, up in the Himalayas, the glaciers are melting. Rising world temperatures are the reason. And Bhutan, despite having few cars and no heavy industry which contribute to the greenhouse gases blamed for global warming, is facing a potential calamity. (22.05")

MORE SHOTS OF LAKE
AROUND GLACIERS

As the glaciers melt, lakes are forming within the glaciers themselves. There are more than 2,600 glacial lakes in Bhutan and with the increase in the water melting into them, some are in imminent danger of bursting. One that could burst as early as 2010, experts predict, is Thorthormi Lake. (22.83")

(NAT SOUND: GLACIOLOGISTS)

SATELLITE IMAGE WITH RED
GRAPHIC FRAMING

NARRATION:

This satellite image from 2002 shows Thorthormi lake capped with a surface of ice, rocks and mud. But, beneath the surface, the volume of water is increasing.

SHOTS OF LAKE AND ROCKS

The rising lake is clearly visible in *this* video from summer 2009, through holes in the ice cap and in places where the ice has completely melted away. (23.59")

SMALL STONE DROPPING INTO
LAKE

The lake is held in place by a narrow barrier of ice and moraine at the glacier's tip. But

GRAPHICS OF STREAMING
WATERS

the rising lake and thinning of the ice-wall itself are placing the barrier under ever-increasing pressure. Should it burst, a wall of water would surge into the valley communities below, sweeping away everything and everyone in its course. (25.96”)

DUKPA ON CAMERA

DOWCHU DUKPA: (In English)
“I think people term it as the tsunami from the sky” (3.57”)

GRAPHICS

NARRATION:
Dowchu Dukpa, an engineer at the Bhutanese Ministry of Geology and Mines, has been studying Thorthormi glacier for years. (8.38”)

PICTURE OF GLACIERS

DOWCHU DUKPA: (In English)
“If this whole glacier melts, which it will do in the course of time, that could create a worst-case scenario.” (8.95”)

UGEY IN HIS HOUSE

NARRATION:
It’s not a scenario Dzongpon Ugey likes to think about. If a Glacial Lake Outburst Flood happens, his house on the flat banks of the Pho Chu River where he lives with the 34 members of his family will be directly in its path. (16.02”)

DZONGPON UGEY: (In Dzongkha)

“When I built this house two years ago, no experts from outside had ever visited this area and so I was not aware of the dangers of flooding.” (7.57”)

UGEY ON CAMERA

“Now I know the danger, I really regret building it here.” (2.54”)

NARRATION:

KARMA IN HER HOUSE
WORKING HER TAPESTRY

Further down the river, 50-year-old Karma lives with her aged mother and one daughter, just metres from the river’s edge. She was born on this land but lives in constant fear of a sudden flood. (12.79”)

KARMA: (In Dzongkha)

“When it comes to myself, I may be able to run away but we worry for our elderly relatives who may not be in a position to escape immediately.” (8.18”)

KARMA WALKING OUT OF HER
HOUSE

“When they talk about the likely chance of a lake bursting, I am terrified.” (4.34”)

NARRATION:

WATER FILLING OUT IN BASIN

Understandably. She lived through an earlier flash-flood in 1994 which destroyed her corn fields and swept away part of her garden. (10.50”)

KARMA SHOWING WHERE
FLOOD CAME NEAR HER
PROPERTY

KARMA: (In Dzongkha)

“When the flood came, I had corn growing here ... and this was the level of the water, here” (4.06”)

KARMA ON CAMERA

KARMA: (In Dzongkha)

“That night, I was very afraid to tie my cows in case the waters rise and drown them. We did not sleep the whole night – we just kept watching the level of the river.” (13.30”)

FOOTAGE OF 1994 FLOOD

NARRATION:

Twenty eight people lost their lives in that flood in 1994 when an adjoining lake burst, and many more their homes and livelihoods. If the lake at Thorthormi Glacier bursts, the wall of water could be three times higher than in the previous flood. (17.57”)

SATELLITE GRAPHIC IMAGES

NARRATION:

So in August 2009, the Bhutanese government, supported by international organizations, launched an innovative, ambitious project to take pressure off the moraine barrier and to reduce the water level in Thorthormi Lake. (14.87”)

DUKPA ON CAMERA

DOWCHU DUKPA: (In English)

“It seems we are the first country in the entire world to implement climate change

adaptation programme.” (8.54”)

NARRATION:

DUPKA GOING UP MOUNTAINS
WITH GROUP

Engineer Dowchu Dukpa is also the Manager of the Thorthormi Lake project, staffed by more than 300 local men and women. For nine days, they trekked up to the 5000-metre high lake, using horses and yaks to transport literally tons of food and primitive digging equipment. (22.05”)

MORE CROWDS IN
MOUNTAINS

They spent three months there last summer and will return for two more summers. Even in this the warmest of seasons, conditions are severe – they work up to their knees in icy water and many with nothing but their bare hands. (20.35”)

MEN PULLING ROCK
TOGETHER

Their goal is to lower the lake level by five metres, to protect the people below. (5.22”)

They carve out a drainage channel, to release water gradually from the lake. (4.70”)

DOWCHU EXPLAINING SITE
WORK

(NAT SOUND: DOWCHU EXPLAINING WORK ON SITE: “Basically they are pulling the bigger boulders; they are dragging with the help of rope. They are using hammers to break those larger boulders And then those pick axes to dig the naturals out. They have lowered this level by 47

centimetres.”)

NARRATION:

LONG SHOT OF GROUP STILL
DIGGING BY THE LAKE

Although the water levels are in the process of being lowered, it's a gamble – both against the elements, and time. The risk of flash floods for the people in the valley below is still looming. The barrier containing the lake could burst at any time, and possible earthquakes or avalanches could also dislodge the barrier and release the tsunami. So everybody downstream has to be prepared. (31.32”)

LANDSCAPES

DASHO DZONGDAG: (In English)

DZONGDAG WALKING

“We hope for the best and prepare for the worst.” (3.00”)

NARRATION:

DZONGDAG WALKING
THROUGH DOOR

Dasho Dzungdag, is the Governor of the Punakha district and the valley of the Pho Chu River. He explains the rudimentary early-warning system already in place to allow people to save themselves if the lake bursts. (14.59”)

DASHO DZONGDAG: (In English)

DZONGDAG ON CAMERA

“We have appointed focal persons in every village, every settlement beginning from the source ‘til down the land. And we have supplied them with telecommunications facilities and mobiles.” (13.93”)

KONCHOE IN SHOP

NARRATION:

So Konchoe, this village's shopkeeper and focal person, never lets his mobile out of his sight. If he gets the call that a tsunami is underway, it will be his duty to warn all his neighbours scattered over the entire valley to literally run for their lives. With only an estimated six hours between the lake bursting and this valley being under water, there's no room for human error. (28.50")

TECHNICIAN TAKING MEASUREMENTS

So a high-tech automated early-warning system that can detect dangerous rises in lake levels and sound the alarm is now planned. (10.65")

DRUKPA TO CAMERA

DOWCHU DRUKPA: (In English)

"The plan is to install sensors at the source here as well as a little bit further downstream that would give enough lead time for the settlements or for the people to evacuate." (12.19")

GLACIERS AND STREAMS

NARRATION:

While the imminent threat from water clearly exists, there is an even greater fear for the long-term. What would happen if all the glaciers ultimately melt, as some experts predict? How will Bhutan survive without its water? Bhutan's water, or its "white gold" as it's called, not only supports life and agriculture – it is also the backbone

of its economy. Hydroelectricity export is the single most important source of revenue for the country. (30.99”)

HYDRO POWER PLANT
OFFICES

DOWCHU DRUKPA: (In English)

“As we are entering the 21st Century, hydropower seems to be the driving engine of our economy. The climate change process are posing enormous threats to the livelihood and also the infrastructure downstream.” (4.54”)

TOP VIEW OF TRUCK ON
BRIDGE

NARRATION:

And the threat is not just to the people and economy of Bhutan. The changes in the climate which are melting Bhutan’s glaciers are also threatening the entire Himalayan watershed. The consequences are potentially catastrophic. Across southern Asia and China, an estimated 750 million people could experience floods in the short-term as glaciers melt, and drought in the long-term as rainfall patterns change across the Himalayan region. (33.54”)

SATELLITE ZOOM OUTS

BOY SWIMMING IN RIVER

NARRATION:

Back in Bhutan, the waters in the river by Dzongpon Ugey’s fields give no sense of the menace threatening from the mountains. Whilst the work high above to prevent a disaster continues, below the rice harvest is brought in as it always is.(19.00”)

PEOPLE IN FIELDS

But Dzongpon Ugey can't help wondering for how long this peaceful life will remain untouched. (5.97")

UGEY AND WIFE WALKING
TOWARDS TOWN

As they do every year, he and his wife walk to the nearby town of Punakha, for the annual "tsechu" ceremony and a blessing from the Head Lama. Once a Buddhist monk, Dzongpon Ugey believes fate will take its course. (14.81")

CROWDS PRAYING

DZONGPON UGEY: (In Dzonkha)
"As the old Bhutanese saying goes "Your real enemy is fire or water" – nobody can defeat them. It is our fate and we have to live with it." (4.54")

(NAT SOUND- BLESSING CEREMONY)

ANCHOR INTRO #2 (18.02")

[KENYA: ZORRO THE WILDERNUR]

Now the story of a remarkable man who devoted himself to rescuing and healing some of the largest and fiercest creatures in the world. Kenyan Zahoor Kashmiri, simply couldn't bear to see animals suffer. His passion was to have fateful consequences.

SCRIPT – SEGMENT #2 (10'20")

Zorro the Wildernurse

VIDEO

AUDIO

WILDLIFE KENYA/ BIRDS/
GIRAFFES ...

NARRATION:

Kenya's spectacular national parks. Wild animals roam free. But there's trouble in paradise. Sometimes humans are the cause and sometimes they come to the rescue. (13.84")

HELICOPTER CHASE AND
DARTING OF RHINO

Tracking and capturing an injured wild animal like a black rhinoceros isn't easy. (4.80")

Once the tranquiliser dart has found its mark, the team has to be quick – the rhino won't stay under for long. Dr. Zahoor Kashmiri is the veterinarian in charge. (12.78")

KASHMIRI AND TEAM TAGGING
RHINO

After treating its wounds, the team tags the animal and blunts its horn as a safety precaution. The black rhino has been driven near to extinction by poaching, but this one will be saved. (12.87 ")

KASHMIRI ON CAMERA
(PROFILE)

KASHMIRI: (In English)

"This was a bit of fighter. You expect anything; with a black rhino you expect

anything.” (7.10”)

NARRATION:

RHINO BEING PUT INTO TRUCK This rhino is on his way to an animal sanctuary in Kenya. (3.28”)

KASHMIRI WITH VARIOUS WILD ANIMALS For Dr. Kashmiri, an instinctive connection with animals led to a lifetime passion for saving large and often dangerous wild creatures. (8.23”)

SISTER: (In English)

ZEBRA GALLOPING “I think it was his concern and his feelings for anything suffering.” (3.96”)

NARRATION:

Arfa Din is Dr. Kashmiri’s sister. (2.41”)

ARFA DIN: (In English)

“He just couldn’t bear that, you know, pain to anyone.” (3.57”)

NARRATION:

STILL PHOTOS KASHMIRI Over the years Dr. Kashmiri’s renown spread throughout his native Kenya and beyond. He was nicknamed Zorro, for his fearlessness and his ability to rescue large animals. He frequently worked for no fee. (14.07”)

ZAHOOR: : (In English)

“Basically one of the main problems is that

people are trying to trap animals or trying to kill them for food, so a lot of times we come across animals which have either snares on them or spears or arrows – that is a man-made problem.” (17.96”)

NARRATION:

DARTING ELEPHANT MOTHER
AND CALF

Another animal, another high risk situation. A baby elephant has been wounded in a snare – but the protective mother has to be anaesthetised first. Dr. Zahoor then darts the calf. The herd, now alarmed, swarms around the drugged elephants and threatens the team. A six-ton bull elephant tries to revive the calf – and warns off the rescuers. But eventually, Dr. Zahoor is able to approach and works to free wires around the baby elephant’s leg. In time, mother and baby are reunited, and the prognosis looks good. (51.76”)

Now a new case – this time an adult elephant needs running repairs. (4.71”)

KASHMIRI: (In English)

PREPARATION FOR ELEPHANT
TREATMENT AND DARTING

“For what it looks like, it has a foot injury which has developed into an abscess.” (5.01”)

DARTING AND TREATMENT OF
ELEPHANT

“With elephants, once they’ve injuries like that with pus, once you drain it they heal very well; very quickly and very well. ...

“With elephants it’s very important. They must move as soon as they can. If they can’t move their digestive system gets finished. They don’t eat enough, they don’t exercise, they go down.” (18.18”)

“As life conservation becomes more and more intense there’ll be more and more need for such things, because there will be ever increasing human wildlife conflict.” (9.35”)

MELANIE VIRTUE : (In English)

“The work that Kashmiri did with elephants is really important in places like Kenya because they are really quite endangered there.” (6.90”)

NARRATION:

ELEPHANTS BEING SHOT

Melanie Virtue works with the UN to help monitor and protect wild animals like elephants through the Convention on Migratory Species. In the last 12 months alone, she says, about 100 elephants have been killed in Kenya – some because of drought and some by poaching for ivory. (21.55”)

MELANIE VIRTUE: (In English)

“Elephants, especially when times are hard, when there’s drought, they’ll come into people’s homesteads. They’ll attack their

vegetable gardens and their farms and in the course of one night an elephant can wipe out the entire crop that a family depends on for the next six months – and so this puts a real conflict between humans and elephants.” (18.75”)

KASHMIRI SHOWS FILM OF ELEPHANT WITH SPEAR IN HEAD

KASHMIRI: : (In English)

“This is quite an interesting case of a very nice and big bull elephant which might have strayed into people’s farms. As a result he was speared by a Masai spear on the head.” (15.03”)

KASHMIRI REMOVES SPEAR

“You can see the spear – it’s at least gone eight inches into the head, and then of course the elephant must have been trying to remove the spear and in the process he has bent the spear. Fortunately in that part of the head it’s basically sinuses so it is not causing damage to any vital organs. But of course it is causing a lot of irritation and stress to the animal and pain and if it is not treated it will get infected and you can get a very serious...” (30.06”)

PHOTOS OF HIPPOS IN SEA

NARRATION:

One of Dr. Kashmiri’s best-known and most remarkable rescues took place in the aftermath of the 2004 tsunami that devastated regions of the Indian Ocean. A young 600-pound hippopotamus, whose

mother had been killed by the giant waves, was swept out to sea and stranded on a coral reef. (20.03”)

KASHMIRI: : (In English)

“It’s an unusual experience even for me – that we find a hippo, especially a young one, out in the sea.” (5.61”)

NARRATION:

TRANSFERRING HIPPO FROM TRUCK

Dr. Kashmiri helped transfer the nervous and exhausted hippo, now named Owen by his rescuers, to an animal sanctuary. (7.63”)

KASHMIRI: (In English)

ARRIVAL OF HIPPO AT PARK

“As we let it go it just walked away. I’m very glad we didn’t have to immobilize it or use tranquilizers on it. Of course it’s only stress because it’s in a new environment and it’s been in a net for some time, but I think it will be no problem. In two or three days it will be settled in.” (16.98”)

NARRATION:

HIPPO AND TORTOISE TOGETHER

Dr Kashmiri was right. Owen did settle in – but then something extraordinary took place. Owen was put in a pen that happened to contain a cranky, 130-year-old tortoise called Mzee. Maybe it was something about Mzee’s rounded shape

that reminded Owen of his lost mother, but rather quickly, the pair began to form an unlikely bond. (24.07”)

Owen started imitating his new mother figure, observing what Mzee ate and following the tortoise’s movements closely. It was the beginning of a beautiful friendship – which stretched into months, and then years. (15.05”)

The two became so close it was hard to separate them, even when damage to Mzee’s shell necessitated some running repairs. (8.37”)

KASHMIRI: (In English)

“Enough! Enough!

The reaction from Owen has been tremendous – he’s very, very protective of Mzee.” (11.05”)

“It’s quite a miracle. Really that’s the only way you can explain it ‘cause if you tried to connect them as species you cannot find a connection and obviously it’s just pure, genuine love for each other.” (11.61”)

NARRATION:

Eventually, Owen was moved to a separate pen with another hippo called Cleo, in the hope that they would mate. Sadly that

HIPPO

meant a parting of the ways with Mzee who might have been hurt by two growing hippos unaware of their own strength. (15.52”)

KASHMIRI WITH ANTELOPE
AND ELEPHANT

In September 2008 Dr. Kashmiri received a call for help from Ethiopia; the assignment was to lead to tragedy. (8.64”)

STILL PHOTO OF KASHMIRI
WITH ELEPHANT

Once more, the call was about elephants. The doctor’s expertise was needed to attach a GPS positioning device to a particularly dangerous bull elephant – the one in this photo. It was Kashmiri’s second visit to the herd. His sister was later told what happened: (21.31”)

ELEPHANTS RECOVERING
FROM DARTING

ARFA DIN: (In English)

“Normally when elephants are reviving they stagger a lot from the medicine they have had and everything, the tranquiliser, but the veterinary doctor told me that he (the elephant) was completely alert the moment he was on his feet and he was very aggressive and he went straight for them.” (16.19”)

NARRATION:

Dr. Kashmiri was killed by the elephant he was trying to save. (3.83”)

ARFA DIN: (In English)

“I cannot thank my Allah enough for giving me the privilege of being a sister to such a great human.” (10.27”)

NARRATION:

KASHMIRI WITH WILD ANIMALS Zorro, in the end, gave his life to stop the suffering of animals. His death was a profound shock for his fellow Kenyans, and brought tributes from across Africa and from overseas. Not long before he died he wrote that he thanked God for having more than his share of a good life. (19.90”)

KASHMIRI: : (In English)

“You know this is a unique experience for people who are not exposed to this kind of work. What I’ve learned, I do it because of the animals and I hope I can impart this knowledge to somebody else so they can learn from my experience and treat animals in the same way.” (13.77”)

[SHOW CLOSE] (7.39”)

That’s all for this edition of 21st CENTURY. I’m Daljit Dhaliwal. We’ll see you next time. Until then, goodbye.

CREDITS #40 (13.00''):

21st Century

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BHUTAN: Tsunami from the Sky

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