

An aerial photograph of five Indian Air Force fighter jets, likely MiG-29, lined up on a runway. The jets are painted in a light blue-grey color with red and white markings on the nose and tail. The runway is paved with grey concrete blocks and has white and yellow markings. The text "IMPACT OF CLIMATE CHANGE AND SECURITY" is overlaid in yellow, underlined, capital letters across the top half of the image.

IMPACT OF CLIMATE
CHANGE
AND SECURITY

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(India)

INTRODUCTION

- **CLIMATE CHANGE AND SECURITY - GLOBAL CONCERN**
- **COULD WORLD BE HABITABLE WITHOUT GREEN HOUSE GASES**
- **METHANE EMISSIONS ARE 23 TIMES MORE POTENT THAN CARBON DIOXIDE (CO₂)**
- **CLIMATE CHANGE TODAY IS FAST BECOMING A MAJOR THREAT TO THE WORLD.**
- **THE DIVIDE BETWEEN HAVES AND HAVENOTS IS BECOMING LARGER INSTEAD OF REDUCING**

INTRODUCTION

➤ UNSUSTAINABLE CONSUMPTION PATTERNS IN DEVELOPED NATIONS RESPONSIBLE FOR CLIMATE CHANGE.

➤ 25 % OF GLOBAL POPULATION EMITS MORE THAN 70% OF THE TOTAL GLOBAL CO2 EMISSIONS.

➤ DEVELOPING NATIONS EMIT 0.25 TONNE OF CO2 PER PERSON IN A YEAR VIS A VIS 5.5 TONNES IN DEVELOPED NATIONS.

EFFECTS OF CLIMATE CHANGE

- **NOT ALL POSSIBLE CONSEQUENCES OF CLIMATE CHANGE ARE FULLY UNDERSTOOD.**
- **INDIA HAS A VERY LARGE STAKE AS IT IS A DENSILY POPULATED AGRICULTURE DEPENDENT COUNTRY, HEAVILY RELIAINT ON MONSOONS FOR IRRIGATION.**
- **CLIMATE CHANGE WILL LEAD TO REDUCED LAND AVAILABILITY, FOOD /WATER SHORTAGES, EXTREME WEATHER CONDITIONS, ETC..**
- **INDIA IS THE SEVENTH LARGEST AND SECOND MOST POPULATED NATION WITH LARGE NUMBERS TO FEED.**

THREAT TO INDIA'S SECURITY

AMID FAILING STATES

Armed men — allergic to democracy — have created a ring of failing states around India. Should we be alarmed about our restless neighbours?

Shobhan Saxeena | TNN

Hope turns into despair with alarming speed in our part of the world. Last year, it seemed the region was on its way to making peace with itself — the Pakistani army was back in the barracks in Islamabad; the Nepali army had signed a pact with Maoist rebels, in Sri Lanka, a ceasefire was holding between the army and Tiger rebels; in Bangladesh, a popular government was back in power; Bhutan was on the path to a peaceful transition to democracy; and in the Maldives, a

dissident rose to power after free elections. But, things can change in a jiffy in South Asia and we are back to the familiar script. Armed men in uniform — part of government armies and fundamentalist forces — are calling the shots. As our neighbourhood smoulders and burns and democratic institutions flounder, India watches cautiously — careful not to fuel the fires and apprehensive about conflicts spilling over porous borders.

Pakistan: Allah, Army & America

Pakistan just can't escape the three As. In 2000, US secretary of State Colin Powell declared that Washington and Islamabad stood "at the beginning of a strengthened relationship", obviously aimed at the Taliban-Al Qaida nexus in Afghanistan. But, despite billions of dollars in aid and military hardware from the US, the Pakistani army is playing its own games, some of them directed at India. With Kabul facing the threat of falling into Taliban-Al Qaida hands and the NWFP government signing a deal with extremists in the Swat region, it's clear that the 'war on terror' is all but lost.

With a political novice in charge of the country in such difficult times, Pakistan's very survival is being questioned. Some Pakistan-watchers argue that the nuclear-armed country could easily collapse into internal anarchy or fall to an Islamist revolution virtually overnight. But, not everyone is so dismal. "Pakistan can be described as a troubled state but not as a failed state," says Hasan Askari Rizvi an analyst from University of Pennsylvania.

Big Brother is just watching

Whether we like it or not, South Asia suffers from the Big Brother syndrome. Now, with India encircled by a ring of fire, the question is what is to be done? Experts say India should tread cautiously as far as Pakistan is concerned, trying hard to improve relations and facilitate the flowering of real democracy there. This, they say, could be the best way to fight terrorism. But, with

Pakistan giving in to the Taliban, New Delhi may have any option but to wait and watch. Actually, that's what the Indian government has been doing, apart from making some gaffes at its own expense. With the season of elections upon us, India has to be careful about what it says or does about Bangladesh and Sri Lanka as this could have immediate political implications. So what's

Bangladesh: Bloodbath again

For those who believed the pangs of Bangladesh's bloody birth were over, last week was a shock as paramilitaries belonging to the Bangladesh Rifles turned their guns on senior officers and the army. With army tanks rolling into Dhaka and the mutiny spreading to smaller towns, the country appeared to be just a few shots away from another internal

war. In his maiden tour of South Asia in 2000, US President Bill Clinton made it a point to visit Dhaka for a day. It was a point well made. It was the time Bangladesh was being praised by the world as a Muslim-majority country with a flourishing Western-style democracy. It was receiving plaudits for other attributes as well: a vibrant civil society, NGO success stories, the micro-credit revolution. And it was in focus for the untapped reserves of gas under its impoverished land. The gas represented the future and wealth that could have changed the face of the nation. But the 'mutiny' appears to have taken Bangladesh back in time, to an earlier century. Almost every other indicator coming out of the country is bleak: rising poverty, growing religious fundamentalism, faltering institutions and a restless army. To many, Bangladesh is the perfect example of a state on the verge of collapse, if not failed already.



A body being uncovered from a mass grave inside the BDR headquarters in Dhaka on Saturday



Nepal: Constitutional crisis



Nepal's soldiers marking Army Day last week

When the Maoists abandoned the broad swathes of the country they controlled during the civil war and arrived in Kathmandu, Nepal seemed to have conquered its troubles. Not at all. Now the Maoists, in government for the first time, are locked in a different battle - with the national army. They want their armed cadres to be inducted into the military. But the army chief is blocking the move as he is wary of the armed Maoist cadres' political ideology. The friction is ominous as restless Maoist cadres talk of another revolution and the government fails to deliver on the promises it made during the civil war. Meanwhile, the government plans a long-term friendship treaty with China as a bailout insurance plan, ahead of prime minister Pushpa Kumar Dahal's visit to Beijing. Not a good sign for India.

Sri Lanka: Deadly games



THREAT TO INDIA'S SECURITY

- SURROUNDED BY NOT SO VERY FRIENDLY NEIGHBOURS WHICH WILL ADD TO THE WOES OF CLIMATE CHANGE.
- EXTREME WEATHER CONDITIONS – VERY LARGE POOR POPULATION TO BE PROTECTED.
- UNPREDICTABLE MONSOONS LEADING TO DROUGHTS, AND FLOODING IN VARIOUS AREAS – ACUTE WATER SHORTAGE.
- MELTING GLACIERS – SHORTAGE OF WATER FOR AGRICULTURE DURING DRY MONTHS WILL HAVE CATASTROPHIC EFFECT ON FOOD PRODUCTION.
- LOW LYING COASTAL AREAS WILL GET ENUNDATED, LAKSHWADEEP AND ANDAMAN NICOBAR ISLANDS WILL DISAPPEAR DUE TO RISING WATER LEVEL IN THE SEAS.

TOPOGRAPHY

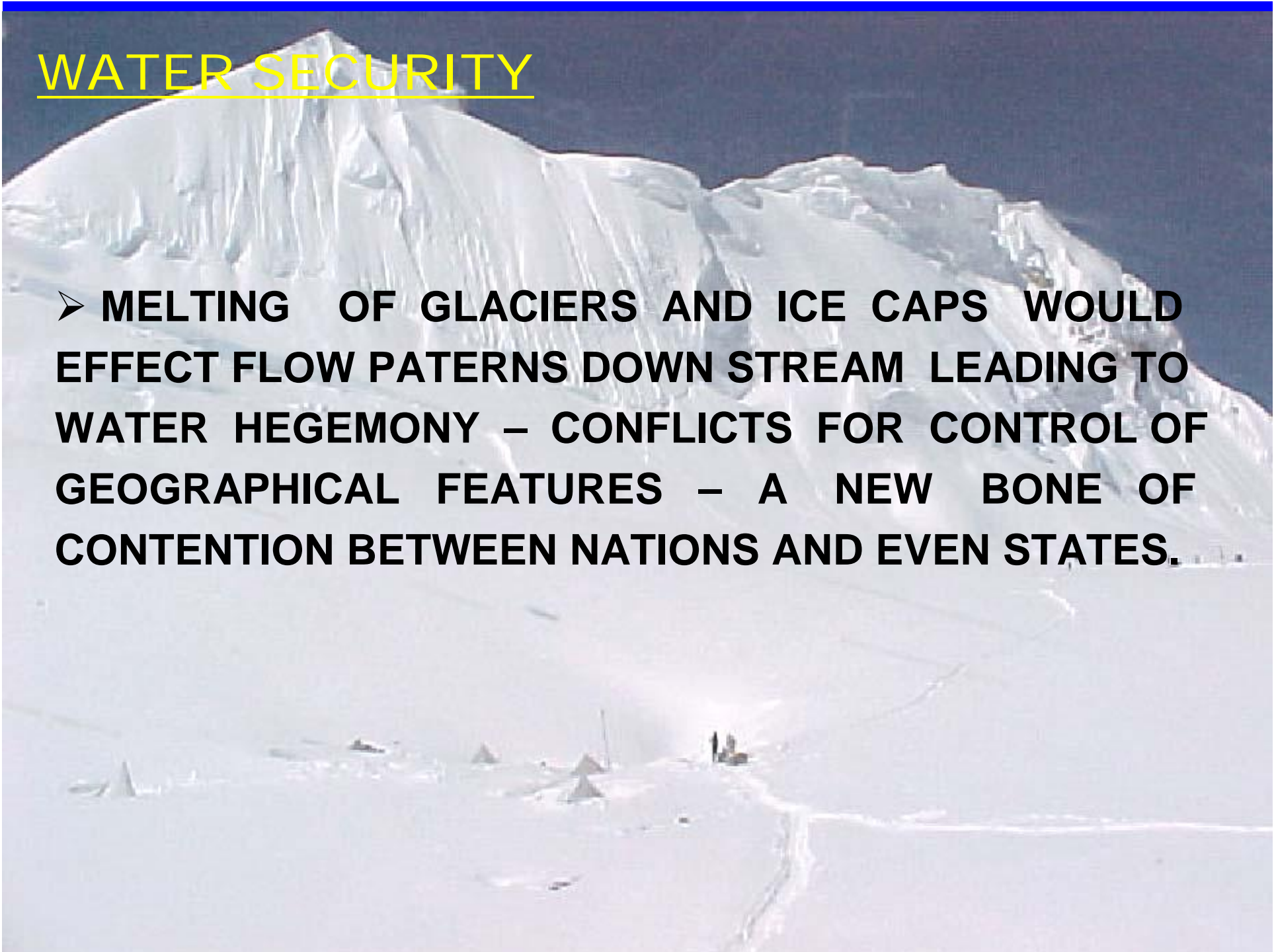
- AREA COVERED 32,87,2631 SQ. KM. (approximately 33 million).
- HIMALAYAS TO THE NORTH WITH 1500 MILES OF GLACIERS.
- LAND FRONTIER 15,200 KMS.
- COASTLINE 7,516 KMS.
- BROADLY DIVIDED IN THREE DEFINED PHYSICAL FEATURES, HIMALAYAS, INDUS-GANGA-BRAMAPUTRA BASIN AND PENINSULAR India.

WATER SECURITY

- **INDIA HAS HUNDREDS OF GLACIERS ACROSS 1500 MILES OF HIMALAYAS FEEDING THE RIVERS WITH WATER.**
- **ISRO STUDY ON 466 GLACIERS REVEALS A 20 % REDUCTION IN SIZE SINCE 1962 TO 2000. THIS RATE IS CONSTANTLY INCREASING.**
- **RATE OF RETREAT OF GLACIER MORE THAN 170 FEET PER YEAR.**
- **NETWORK OF HIGH MOUNTAIN RANGES AND GLACIERS SUSTAIN MORE THAN A DOZEN RIVERS CATERING TO BILLIONS OF LIVES IN INDIA, PAKISTAN, BANGLADESH.**

WATER SECURITY

➤ **MELTING OF GLACIERS AND ICE CAPS WOULD EFFECT FLOW PATERNS DOWN STREAM LEADING TO WATER HEGEMONY – CONFLICTS FOR CONTROL OF GEOGRAPHICAL FEATURES – A NEW BONE OF CONTENTION BETWEEN NATIONS AND EVEN STATES.**



LAND SECURITY

➤ HIGH FREQUENCY OF UNPRECEDENTED WEATHER WILL RESULT IN INFLUX OF POPULATION LIKELY TO EFFECT GLOBAL PEACE

➤ BASIC HUMAN SUSTENANCE IN COASTAL AREAS WILL BE EFFECTED GIVING RISE TO ECONOMIC DISPARITY A MAJOR THREAT TO INTERNAL SECURITY


The Greenhouse Effect

ENERGY SECURITY

- **DEVELOPING NATIONS HAVE A NEED FOR ENERGY. THE CHEAPEST METHOD OF GENERATING ENERGY IS BY USING ABUNDANTLY AVAILABLE BUT HARMFUL FOSSIL FUELS.**
- **THESE NATIONS MUST USE RENEWABLE AND CLEAN NUCLEAR POWER TO REDUCE GLOBAL WARMING.**
- **IN THE CASE OF INDIA, SIGNING OF THE 123 AGREEMENT WILL ENSURE TREMENDOUS INCREMENT IN USE OF NUCLEAR ENERGY.**



FOOD SECURITY

- **INDIA HAS VERY LARGE AREA UNDER CEREAL CULTIVATION AND IS ONE OF THE LARGEST PRODUCER OF STAPLE FOODS.**
 - **BY 2010 PER CAPITA AVAILABILITY OF LAND IN INDIA WILL SHRINK FROM PRESENT 0.8 HECTARE PER PERSON TO 0.3**
 - **IT IS PREDICTED THAT BY 2050 THE ARID AREAS WILL RECEIVE INCREASED RAINFALL AS AGAINST CULTIVATED AREAS DUE TO CHANGE IN RAIN PATTERN.**
 - **A 2 DEGREE RISE IN TEMPERATURE REDUCES FOOD PRODUCTION BY 10 – 15 %. NO WONDER THE THE FIGURE OF 500 MILLION UNDER NOURISHED IN ASIA CONSTANTLY INCREASES.**
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GLOBAL CONCERNS

- PERCEPTION IS THAT MEASURES FOR SLOWING DOWN GLOBAL WARMING MAY CHANGE STRATEGIC IMPORTANCE OF NATIONS .
- DEVELOPING COUNTRIES DO NOT FAVOUR CHANGE DUE TO FEAR OF CHANGE IN STRATEGIC IMPORTANCE, THEREFORE, ARE RELUCTANT TO INTRODUCE MEASURES WHICH WILL HAMPER THEIR PROGRESS.
- THE UNI - POLARITY OF THE WORLD IS UNDER THREAT OF CHANGE – NOT A VERY PALATABLE PROSPECT.
- DEVELOPING COUNTRIES WILL HAVE TO ADAPT TO CHANGES IN AGRICULTURE THAT ARE REQUIRED TO REDUCE GREEN HOUSE GAS EMISSIONS.

GLOBAL CONCERNS

DISPARITY IN ECONOMIC STATUS - IS LINKED WITH THREAT OF CLIMATE CHANGE WHICH IS NOT TRUE. CLIMATE CHANGE WILL EFFECT THE DEVELOPED MORE THAN THE DEVELOPING NATIONS.

➤ **ADOPTING CLEAN MECHANISMS FUNDED BY DEVELOPED NATIONS IS NO LONGER AN ACCEPTABLE SOLUTION AS SOME OF THE DEVELOPING NATIONS ARE NOW COMPETING WITH DEVELOPED NATIONS.**

➤ **DEVELOPING COUNTRIES WANT TO KEEP THEIR TARGETS OF REDUCING GHG LOW WHERE AS DEVELOPED COUNTRIES WANT THEM TO HAVE HIGHER TARGETS.**



CONCLUSION

In the process of succession on this earth, some organisms modify their environment to such an extent that even they can no longer survive in it. In the quest for technological enhancement, in every field humans are raising their capabilities to such an extent that they probably will overreach themselves, unable to survive in the environment that has been created. Humans may then become a **TRANSITIONAL COMMUNITY** to be replaced by some other organism which has evolved and can survive.

Infrared radiation emitted by the Earth's surface is absorbed by greenhouse gases, adding heat to the atmosphere.

