

**MILITARY & CLIMATE CHANGE**

**SECURITY IMPLICATIONS**

**AIR MARSHAL AK SINGH**

## **INTRODUCTION**

- GREEN HOUSE GASES HAVE ALWAYS BEEN AROUND -
- EVERY TIME AN INDIVIDUAL WATCHES TV, SURFS WEB DRIVES CAR, OR USES ANY FORM OF POWER CO2 IS DISCHARGED.
- EVERY PIECE OF GARBAGE ADDS TO METHANE EMISSIONS, 23 TIMES MORE POWERFUL THAN CO2.
- CLIMATE CHANGE TODAY IS A PROGRESSIVE INCREMENTAL THREAT TO THE WORLD.
- WE NEED A NON PROLIFERATION TREATY REGIME FOR CLIMATE CHANGES.

## **INTRODUCTION**

- UNSUSTAINABLE CONSUMPTION PATTERN 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**

- **INDIA HAS A VERY LARGE STAKE AS IT IS DENSILY POPULATED AGRICULTURE DEPENDEND COUNTRY.**
- **CLIMATE CHANGE WILL LEAD TO REDUCED LAND AVAILABILITY, FOOD / WATER SHORTAGES, EXTREME WEATHER CONDITIONS, ETC..**
- **INDIA IS THE SEVENTH LARGEST AND SECOND MOST POPULUS NATION HAVING TO FEED LARGE NUMBERS.**

# 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 FLOODING IN SOME AREAS AND ACUTE WATER SHORTAGE –DROUGHTS IN OTHER .
- 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.

## **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.**

## **LAND SECURITY**

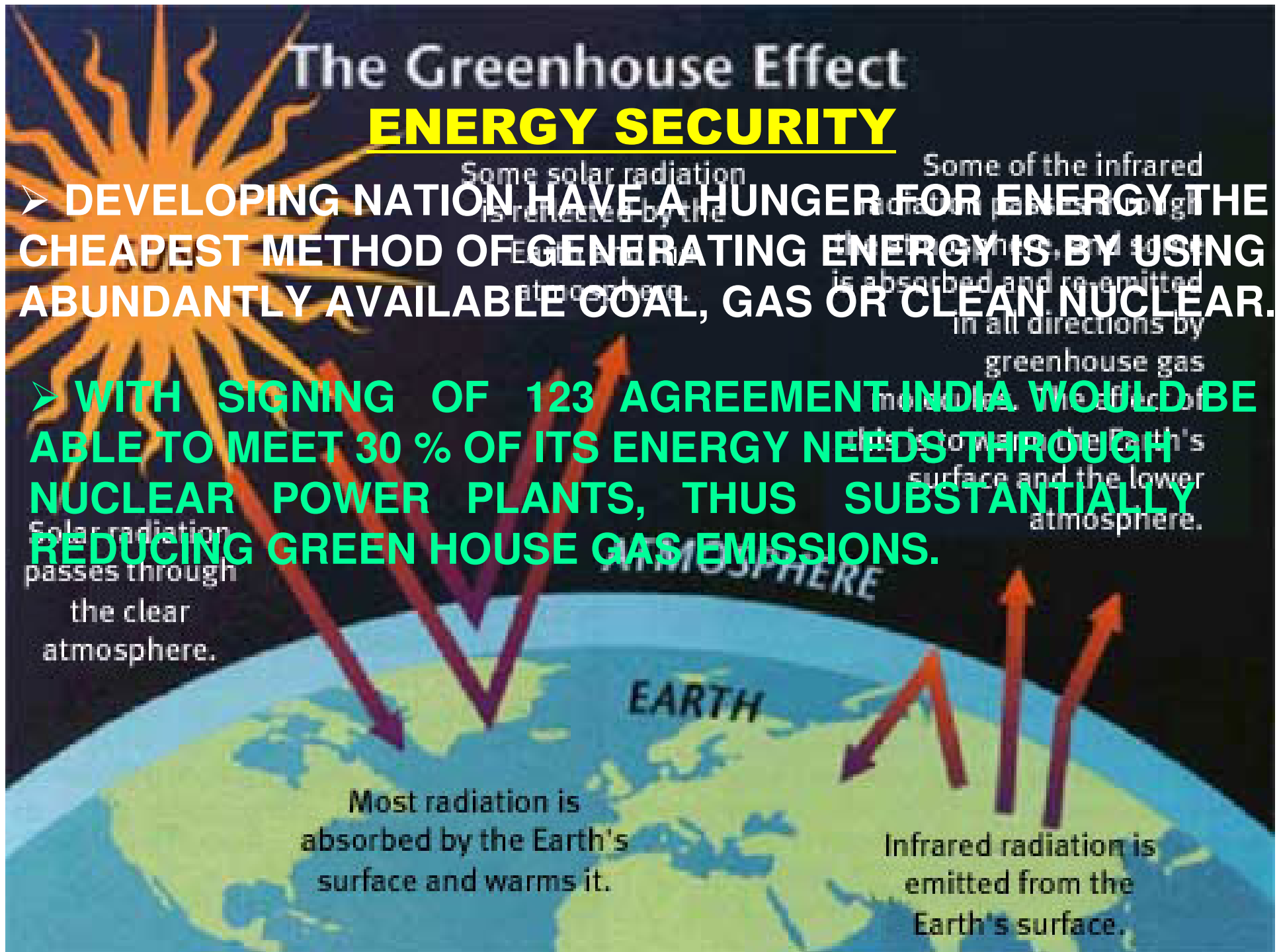
- **HIGH FREQUENCY OF UNPRECEDENTED WEATHER – INFLUX OF POPULATION LIKELY TO EFFECT INTERNATIONAL PEACE.**
- **BASIC SUSTENANCES IN COASTAL AREAS WILL BE EFFECTED GIVING RISE TO ECONOMIC DISPARITY – INTERNAL SECURITY THREAT.**

# The Greenhouse Effect

## ENERGY SECURITY

➤ DEVELOPING NATION HAVE A HUNGER FOR ENERGY THE CHEAPEST METHOD OF GENERATING ENERGY IS BY USING ABUNDANTLY AVAILABLE COAL, GAS OR CLEAN NUCLEAR.

➤ WITH SIGNING OF 123 AGREEMENT INDIA WOULD BE ABLE TO MEET 30 % OF ITS ENERGY NEEDS THROUGH NUCLEAR POWER PLANTS, THUS SUBSTANTIALLY REDUCING GREEN HOUSE GAS EMISSIONS.



## **FOOD SECURITY**

- **INDIA HAS VERY LARGE AREA UNDER CEREAL CULTIVATION AND IS ONE OF THE LARGEST PRODUCER OF STAPLE FOODS.**
- **BY 2010 PER CAPITA AVAILABILTY 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 PATERN.**
- **2 DEGREE RISE IN TEMPERATURE REDUCES FOOD PRODUCTION BY 10 – 15 %. NO WONDER THE FIGURE OF 500 MILLION UNDER NOURISHED IN ASIA CONSTANTLY INCREASES.**

# GLOBAL CONCERNS

- PERCEPTION THAT MEASURES FOR SLOWING DOWN GLOBAL WARMING WILL CHANGE THE STRATEGIC IMPORTANCE.
- 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**

➤ PRIME MINISTER OF INDIA ON RECORD SAID THAT –  
“ CLIMATE CHANGE IS A GLOBAL CHALLENGE. IT CAN ONLY BE SUCCESSFULLY OVERCOME THROUGH A GLOBAL, COLLABORATIVE AND COOPERATIVE EFFORT. INDIA IS PREPARED TO PLAY ITS ROLE AS A RESPONSIBLE MEMBER OF THE INTERNATIONAL COMMUNITY AND MAKES ITS OWN CONTRIBUTION. WE ARE ALREADY DOING SO IN THE MULTILATERAL NEGOTIATIONS TAKING PLACE UNDER THE UN FRAMEWORK CONVENTION ON CLIMATE CHANGE. THE OUTCOME THAT WE ARE LOOKING FOR MUST BE EFFECTIVE. IT MUST BE FAIR AND EQUITABLE. EVERY CITIZEN OF THIS PLANET MUST HAVE AN EQUAL SHARE

**OF THE PLANETARY ATMOSPHERIC SPACE. LONG – TERM CONVERGENCE OF PER CAPITA EMISSIONS IS, THEREFORE, THE ONLY EQUITABLE BASIS FOR A GLOBAL COMPACT ON CLIMATE CHANGE. IN THE MEANTIME, I HAVE ALREADY DECLARED, AS INDIA’S PRIME MINISTER, THAT DESPITE OUR DEVELOPMENTAL IMPERATIVES, OUR PER CAPITA GHG EMISSIONS WILL NOT EXCEED THE PER CAPITA GHG EMISSIONS OF THE DEVELOPED INDUSTRIALISED COUNTRIES. THIS SHOULD BE TESTIMONY ENOUGH, IF ONE WAS NEEDED, OF THE SINCERITY OF PURPOSE AND THE SENSE OF RESPONSIBILITY WE BRING TO THE GLOBAL TASK ON HAND”.**



