**COP – 21**

**INDIA PAVILION – AGRI CORRIDOR**

**Concept Note –**

**CLIMATE RESILIENT AGRICULTURE – INDIAN PERSPECTIVE**

**What Climate Resilient Agriculture means:**

* It contributes to achievement of sustainable development goals
* It integrates – social, economical and environmental development to meet challenge of providing (a) sustainable livelihood to farmers (b) food security to hungry millions, and ( c) eradication of poverty.
* It aims that despite of climate change, income of farmers should not decrease. They should have enough to live and their income should gradually increase.

It is composed of four pillars:

* Sustainably increasing agriculture productivity and income
* Adapting and building resilience to climate change
* Reducing and / or removing green house gas emission wherever possible
* It uses agriculture as a major tool for mitigation of GHG – CO2 by laying emphasis on its unique capacity to absorb CO2 and release Oxygen through photosynthesis process. It envisages to achieve this through (a) increased cropping by reducing rain fed areas through integrated water and river basin management (b) expansion of agriculture on wasteland, wetland, degraded fallow areas and urban agriculture (adapted from FAO source book on Climate Smart Agriculture – 2013).

**Background:**

India when it emerged as independent nation in late forties had acute problem of poverty in rural areas (approximately 90%). India, with agriculture was dependent on rain and due to frequent droughts, needed to import food grains in initial years. There was “Rationing” of food and essential commodities.

But it came out with overall sustainable growth including that of agriculture which had sustained growth at 2% - 4% and has met its food security problem. It has had experience of mitigation drought and scarcity. Now it exports agri-produces including food grains, meat and dairy products.

**Climate Change – Impacts:**

**Current Situation:** In last year, there was decline in food production and in the current year same may happen due to recurrent drought.

**Climate Resilient Agriculture - Indian perspective**

* Climate Resilient Agriculture Programme – NICRA – research, development and extension programme have innovative approach to meet challenges of climate change with total budget Indian rupees 1 billion for five year period. This is a Government of India’s initiative.
* Climate Resilient Agriculture adaptation - mitigation practices – success stories
* Soil Health Card for every farmer for selection of crops which can be sustained by his land.
* Integrated water management approach Government of India’s initiative - conservation of water, check dams, watershed, drip irrigation, integrated river basin management – River basin management – case study of Rukmavati River Basin – Kutch, Gujarat.
* Weather forecasting and Agro Advisory at Block level with Indian Metrological Department initiatives
* Livestock management including shelters for livestock in community grazing land and community and individual Bio-gas plants to mitigate methane emissions.
* Micro enterprises : rural youth – bankable scheme, local level enterprises – multiple skill initiative.
* Multiple source of income to farmers: if one fails, the family can survive on the other
* Involvement of public leadership in Climate Resilient Agriculture approach – Krishi Maholsav approach of Gujarat – A case study.
* Empowering woman farmers.
* Use of Science and Technology in agriculture and promoting protected agriculture
* Credit to farmers: Jan-Dhan scheme – every farmer to have access to Bank credit
* Climate Justice:
* Comprehensive crop insurance structure
* Employment guarantee scheme both statutory
* Food security
* Disaster Management and Land restoration and relief to families
* Public Grievance Redressal System at District level.
* Public Distribution system for essential commodities for poor families.
* Minimum Support Price
* Accident insurance cover to farmers.

**Alternative energy**

* Solar appliances for drying, water pumping and street light.
* Biogas plant based on cow dung, agri waste produce, gas for cooking, vermi- compost as organic manure. Community and individual bio-gas plants (methane emission reduction).

**Objective to promote sustainable development and livelihood**

* It prepares farmers to develop agriculture resilient enough to survive onslaught impact on climate change on regular basis as a permanent feature and not as adhoc or temporary solution.

**Farmers Awareness – NCCSD’s initiatives**

* Capacity building: Farmers, woman farmers and agricultural students and public leaders.
* Guidebook for Climate Smart Agriculture- English, Hindi and Gujarati

Value Added Agriculture (local – provincial)

* Documentary films
* Posters
* Developing policy and programme framework by organizing workshop,

 Seminars, national and international meet with participation of farmers and young

 Students along with experts, policy makers and public leaders.

**NCCSD TEAM – COP 21**

1. NCCSD team lead by Justice B P Singh, formerly Judge , Supreme Court of India
2. Dr. V.V. Sadamate, formerly Advisor, Planning Commission and member NCCSD
3. Dr. Gopichandran, Director Vigyan Prasad and Member NCCSD
4. Dr. Sanjay Deshmukh, Vice Chancellor, Mumbai University and Member NCCSD
5. Dr. A.R. Pathak, Vice Chancellor, Junagadh Agricultural University and Member NCCSD
6. Dr. Kirit N Shelat, Retired Principal Secretary, Government of Gujarat and now Executive Chairman of NCCSD.
7. Shri Shalin Shah, Honorary Secretary – NCCSD
8. Shri Ashwin Shroff, Chairman and Managing Director – Excel Group of Companies
9. Shri J S Gosalia – Vivekanand Research Training Institute
10. Shri. Malay Joshi, Vivekanand Research Training Institute
11. Prof. *Mehboob B. Sheikh, Florida A&M University, USA ( Prof. Sheikh is anNRI)*
12. *Prof.* O.S. Mbuya, Florida A&M University, U.S.A.

NCCSD has quota of six for each week.

**NCCSD is organizing**

* Side event and exhibition in Global Landscape meet on 5th & 6th December 2015.
* It is organizing exhibition in COP – 21 with Namibia
* It also organizing Farmer Day on 2nd December – lead partner International Farmer Organization
* It has applied for holding Side Event in non-formal venue by Government of France.

NCCSD can take up following as a voluntary initiative for supporting Ministry of Environment in Indian Pavilion

* NCCSD can mobilize Indian and other international NGOs for participating programme in India Pavilion as a participants.
* NCCSD can hold about four side events on the subject related to agriculture
1. Climate Resilient Agriculture – Indian perspective
2. Climate Justice – Indian perspective
3. Food , Water & Energy nexus in arena of Climate Change.
4. Need to develop “Knowledge Multiplier model” for transferring technology from those who have it to those who need it.

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 DR KIRIT N SHELAT, I.A.S. (RETD)

EXECUTIVE CHAIRMAN

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