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Kalyan Regional Community Science Center, Bhavnagar

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National Children's Science Congress-2019

મુખ્ય વિષય : સ્વચ્છ હરિયાણું અને સ્વસ્થ રાષ્ટ્ર માટે વિજ્ઞાન, ટેકનોલોજી અને નવીનીકરણ

Focal Theme : "Science, Technology & Innovation for a Clean, Green and Healthy Nation".

પેટા વિષય (Sub Theme)

- ☐ ૧. ઈકો સીસ્ટમ 'અને ઈકો સીસ્ટમ સેવા (Ecosystem and Ecosystem Services)
- ☐ ૨. આરોગ્ય, સ્વાસ્થ્ય શાસ્ત્ર અને સ્વચ્છતા (Health, Hygiene and Sanitation.)
- ☐ ૩. કચરામાંથી સંપત્તિ : વેસ્ટ ટુ વેલ્થ (Waste to Wealth)
- ☐ ૪. સમાજ, સંસ્કૃતિ અને આજીવિકા (Society, Culture and Livelihoods)
- ☐ ૫. પરંપરાગત જ્ઞાન પ્રણાલી (Traditional Knowledge System)



St-1 Ecosystem and Ecosystem Services

1. Allergic problems due to pollen dispersal
2. Alternative uses of weeds (e.g. water hyacinth, lantana, Mesquite)
3. Application of GPS tool in studying distribution of particular plant or animal or group of Species.
4. Application of Geographical Information System - Remote Sensing (GIS-RS) techniques in Studying ecosystem or species.
5. Assessment of living and non-living components of an intermediate zone (Ecotone) and its Associated conservation issues.
6. Beach Erosion - causes, impacts and restoration
7. Butterflies and host plants
8. Carbon footprint studies
9. Catchment treatment for water conservation
10. Change in drainage pattern due to land use changes and impact on ecosystem characteristics
11. Comparison of soil biota in organic farms and other kind of farms
12. Coral Reef diversity and ecosystem services (livelihood)
13. Crop diversity in relation to varied topography and its linkage to soil quality
14. Crows -response to changes, including nest building
15. Distribution pattern of flora & fauna in different landscapes and their significance
16. Diversity of aquatic plants in local water body / bodies and their role in aquatic ecology
17. Environmental Impact Assessment (EIA) of developmental activities in the locality
18. Grazing and spread of plant species through dung/excreta
19. Heronries / rookeries in your village/town and their significance
20. Impacts of anthropogenic activities on coral reef ecosystem productivity including coral bleaching.
21. Impact of invasive alien plants on ecosystem services of terrestrial native vegetation (groves / Gardens / forest)
22. Impact of sounds on animal behaviour (Zoo / domestic / stray animals)
23. Indicator species and ecosystem health
24. Inland wetlands and the Livelihood
25. Insect-Pests and natural enemies – dynamics
26. Invasive alien fishes and their impact on the aquatic ecosystem
27. Invasive aquatic plants and their impacts
28. Invasion of pine in non-glacial zones of the Himalayas
29. Is house sparrow disappearing from our houses and markets? - a critical analysis.
30. Mangroves and ecological services
31. Monitoring Rare, Endangered & Threatened (RET) taxa and conservation measures (prioritizing species)

32. Nectar plants in the gardens and visitation by birds and butterflies
33. Optimal water requirement for different plant species
34. Plastics / garbage and impact on mangroves
35. Pollination dynamics / pollinating agents like insects, bats and birds
36. River bank / sand stabilization by appropriate plant species
37. Road networks and comparative ambient air temperature (with and without avenue trees)
38. Role of natural reed beds in controlling pollutants leading to water body
39. Seed Poisoning and Bird Mortality
40. Shrinking Wetlands and Its impacts
41. Selective planting of trees and its impact on local ecosystem / biota
42. Status of road side trees in city areas and their significance in regulation of urban climate and ecology
43. Status of water regime (i.e availability of water in different forms, viz. precipitation, surface and ground water, snow, soil moisture, humidity etc and its cyclic process) in village / city environment and ascertaining the anthropogenic and natural factors causing changes in it
44. Study of biodiversity hotspots in urban environment
45. Study on the natural seasonal changes in a garden or natural grove and impact of anthropogenic activities on that
46. Study on Road Kills of animals and its ecological consequences
47. Study on the competitive ability of alien invasive species and native species (e.g. *Anogeissus pendula* an excellent native competitor to invasive alien *Prosopis juliform*)
48. Study on the invasive pathways of alien species in different landscapes
49. Study on urban biodiversity
50. Urban bird communities
51. Vegetation as wind Breaks (comparative studies and applied aspects)

St-2 Health, Hygiene & Sanitation

1. Metals / heavy metals in potable water and its management
2. Water quality assessment
3. Biofiltration / bioremediation processes to make water available for recycling
4. Hygiene at personal / familial / community level and its impact on community health
5. Assessment of hygiene maintained at regular basis
6. Level of hygienic conditions during different seasons
7. Occurrence of diseases due to breakdown in hygienic conditions and its management
8. Waste management (eg. Diapers)
9. Diseases (microbial / parasitic) and their impact of social / economical / environmental parameters
10. Impact and management of zoonotic diseases
11. Impact and management of conditions arising out of vital nutrient deficiency / malnutrition
12. Comparison of sanitation before and after Swachh Bharat campaign, in terms of behavioural change
13. Impact of cookware used to cook on health
14. Effect of Indoor Air Pollution on health
15. Maternal health and hygiene during pre and post-partum stages
16. Gender specific health and hygiene and its control / management
17. Safe use of anthropogenic waste in agriculture.
18. Impact of use of public transport on community health.
19. Improving occupational health.
20. Promoting city health through sensing technologies
21. Unobtrusive fall monitoring of the elderly.

St-3 Waste to Wealth

1. Fuel from Animal excreta such as cow dung, bio fuels
2. Endling of E-Waste
3. Identification, documentation & classification of the amount of electronic and electrical goods left unused in one's locality & look out for means for disposal and/or re-use.
4. Solid waste processing and disposal

5. Preparing Briquettes and checking efficient use for soil less plantation
6. Minimizing wastage of irrigation water through improving water retention in the soil using various wastes eg. wood shavings, briquettes, paddy husk, coconut choir, etc.
7. Bio remediation of waste water
8. Hydroponics using grey and/or black water
9. Treatment of kitchen waste water for removal of Fat, Oil Grease
10. Preparing natural dyes from leaves, flowers, fruits of weeds
11. Conversion of discarded flowers into useful products
12. Extracting oil from the seeds of weeds, to be used for illumination
13. Retention of soil moisture using wood shavings, briquettes, paddy husk, coconut husk, hyacinth in crop fields
14. Using paddy straw as substrate for mushroom cultivation
15. Use of Graphite from used batteries (dry cells)
16. Enhancing fertility of land using various wastes
17. Plastic decomposition by bacteria
18. Investigating properties of sponge for water retention and growing plants
19. Use of thrown away corrugated cardboard for making of tiles, panel boards, etc.
20. Preparing tiles and panel boards from tetra pack/ plastic bottles
21. Preparing fertilizer & other useful products from the carcasses
22. Innovative techniques for converting agriculture wastes into useful products

Survey based projects

23. Finding out the average waste generated per day at home. Extend the estimation to waste generated by the block, village, district, etc.
24. Study the packaging trend and estimate the associated wastage
25. Monitoring air quality around waste landfill and garbage dump areas
26. Diversity of organisms/ animals around land fill areas and linkage to vector borne diseases.
27. Impact of polluted water due to presence of waste dumping sites on public health

St-4 Society Culture & Livelihoods

1. 'Society, culture and food system' its relation to sustainable production and consumption case study of a community/tribe
2. Natural Resource Management and Livelihood security – case study of area/community
3. "Society, culture and livelihood" its contribution towards climate change resilience or disaster risk reduction - case study of an area / a community
4. "Natural Disaster and livelihood security" – case study of an area
5. "Social institution and sustainable natural resource management" – case study of a community/ an area
6. "Society, culture and food system" - its impact of cooking energy consumption and management – case study of an area
7. "Impact of social and cultural practices on sanitation and health" – case study of an area
8. "Disaster induced migration and its impact of social, cultural and livelihood practices" case study of a community
9. Social system, cultural practices its contribution to biodiversity conservation/ wild life conservation- case study of an area/ a community
10. Study on occupational hazard and its impact.
11. A study on menstrual hygiene related customs in your locality/community and analyse the positive and/or negative impacts of the same.
12. Identifying traditional customs in your locality that can be detrimental to health of the women in the family.
13. A study on changing livelihood structure, economic condition and associated impacts on production and consumption patterns of your locality
14. Study on impact of scientific intervention in optimizing the production of traditional handlooms.
15. Study on disappearing artisanal communities like blacksmiths with the advent of lathes etc.
16. Skill mapping and gap analysis in a particular community / area and correlation to local demand, local resources.

17. Local economy mapping with local natural resources and conducting feasibility study for local value addition through appropriate technologies.
18. Eco-cultural mapping of a locality to develop eco-tourism operational plan.
19. Study on local festivals /rituals and its relationship with mapping of agricultural/animal husbandry practices and studying the underlying local knowledge base.
20. Analysis of local superstitions / myths and its impact on human development in a sociological perspective.

St-5 Traditional Knowledge System

1. Evaluation of nutritional values of traditional food
2. Documentation of food fermentation techniques and its relation to food quality preservation
3. Study on biodiversity of a particular local community and developing people's biodiversity Register
4. Different architectural structures and its importance in maintaining the ecosystem (e.g Housing, bridges, water distribution canals)
5. Resource conservation methods and its sustainability
6. Various agricultural farming systems and its importance with the future scope
7. Traditional knowledge of various agricultural tools and its applicability in organic farming
8. Sustainable knowledge of various agricultural practices
9. Traditional knowledge of fisherman and its links to sustainable livelihoods
10. Study on community seed bank and its relation to food security
11. Traditional knowledge on Food Preservation Techniques and its importance as source of livelihood
12. Traditional knowledge on natural fibre and its uses in modern context
13. Study on traditional knowledge on ecological restoration mechanism its impact on ecosystem management
14. Design and development of appropriate technology based on traditional technological knowledge
15. Experiment on water harvesting based on traditional knowledge to verify its contemporary applicability

All the best to all and Get Ready for NCSC 2019...

Form Submission Date :

Second Week of September

File Submission Date :

First week of October

District Level :

Second week of October

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