NORTH COASTAL ANDHRA SUB-STATE SITE
BIODIVERSITY STRATEGY & ACTION PLAN

Prepared under the

NATIONAL BIODIVERSITY STRATEGY AND ACTION PLAN - INDIA

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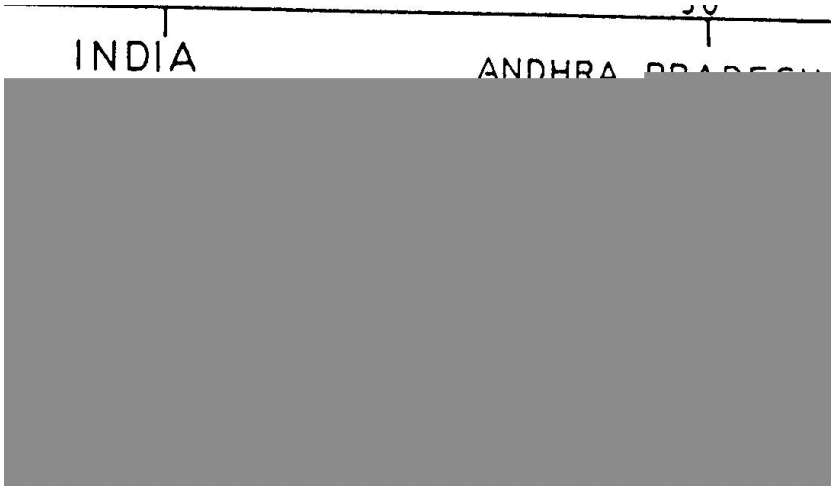
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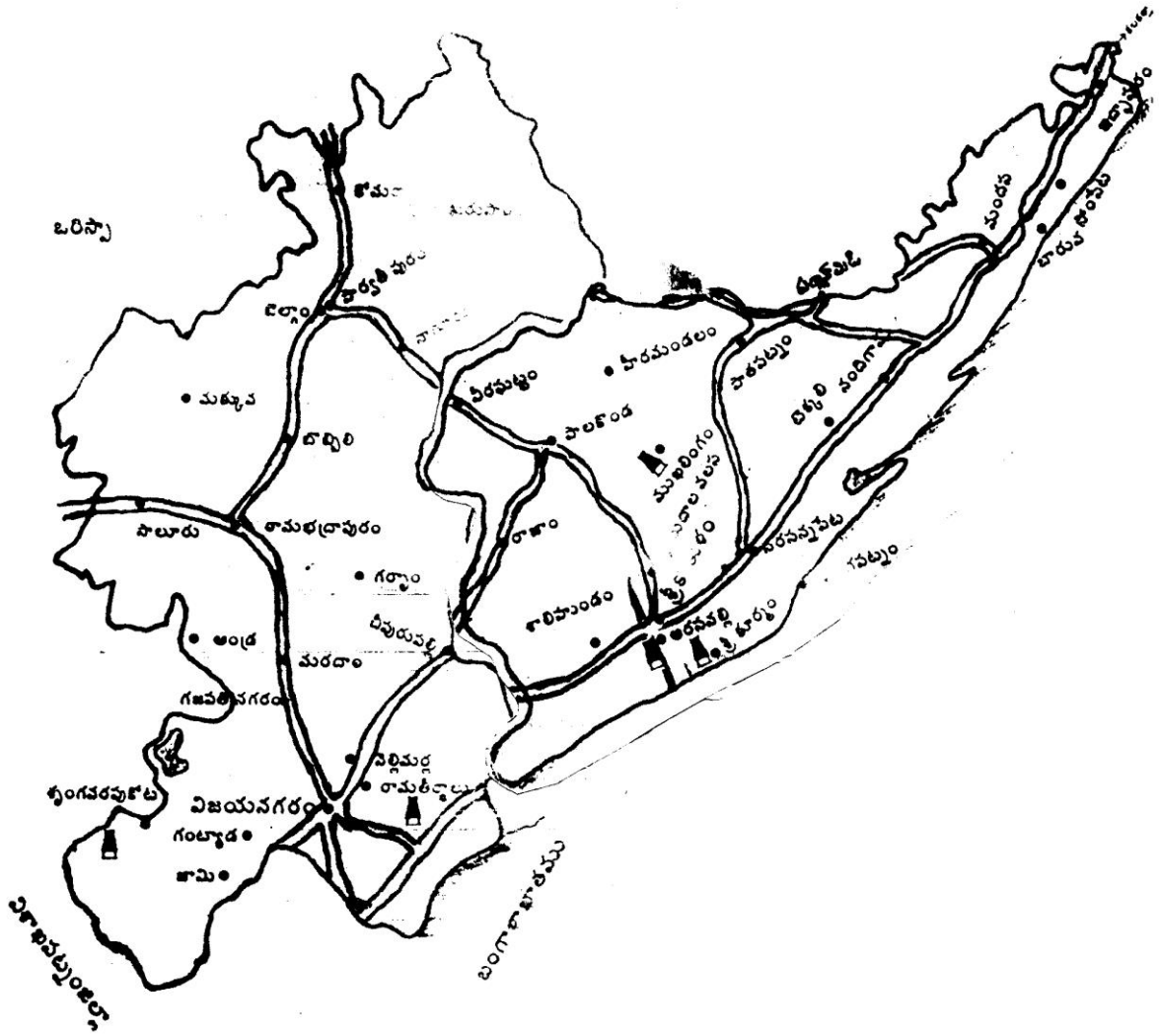
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NORTH COASTAL ANDHRA SUB-STATE SITE BIODIVERSITY STRATEGY AND ACTION PLAN

A Part of the National Biodiversity Strategy and Action Plan (NBSAP)

Nodal Agency: Grameena Punarnirmana Kendram, Kurupam.
Co-ordinator: K. Sanyasi Raju

I INTRODUCTION

The National Biodiversity Strategy and Action Plan (NBSAP), a Project of Union Ministry of Environment & Forest (MoEF) aims to produce a series of planning documents dealing with the conservation of India's biodiversity, sustainable use of its biological resources, and equity including in decisions regardingaccess to such resources and the benefits accruing from them. The project is funded by the Global Environment Facility through United Nations Development Programme (UNDP). A unique aspect of the project is that its technical execution is by a Technical and Policy Core Group (TPCG) being coordinated by an NGO Kalpavriksh, and its administrative coordination is by Biotech Consortium Indian Ltd.

The NBSAP process has included extremely widespread consultation across the country and across all sectors of society, involving tens of thousands of people. It aims to produce not one national action plan, but 18 local (substate) plans, 33 state and union territory plans, 10 ecoregional (interstate) plans, and 13 thematic plans. All these will coalesce into a national plan, but will also remain independent for implementation purposes. In addition, over 30 thematic papers have been commissioned on a variety of topics related to biodiversity.

1) BRIEF BACKGROUND TO THE STRATEGY AND ACTION PLAN (SAP)

This SAP is a part of the NBSAP process which began in the year 2000. The NBSAP envisages action plans at four levels which also includes the sub-state level. The two districts of Vizianagaram and Srikakulam have been assigned as the North Coastal Andhra sub-state site for the state of Andhra Pradesh. In addition to this, AP also has a sub-state site in the Deccan Area, co-ordinated by the Deccan Devlopment Society. The nodal agency assigned to co-ordinate the formulating of action plans at this level for North Coastal Andhra is Grameena Punarnirmana Kendram (GPK), based in village Kurupam, Distt. Vizianagaram. The co-ordinator is K. Sanyasi Raju.

2) SCOPE OF THE SAP

Five major elements are being covered in this SAP. These include:

a) Adivasi (tribal) Livelihoods (including a people's analysis of Joint Forest Management (JFM)/ Vana Samrakshana Samiti (VSS), and the role of the Girijan Co-operative Corporation (GCC).
b) Medicinal Plants (with a focus on the rights of indigenous healers and their patients).
c) District-level education and awareness generation requirements.
d) Livelihoods of Fisherfolk
e) Micro-level planning for the twin villages of Kurupam and Sivannapeta which are on the periphery of the forest.

3) OBJECTIVES OF THE SAP

a) To make recommendations for action plans which would lead to sustainable development in the area, with a focus on the livelihoods of natural-resource dependent people, especially adivasis.
b) To suggest strategies and action plans to conserve biodiversity in the area.
c) To make recommendations regarding protection, regeneration of endangered ecosystems & species.
d) To suggest SAPs to check the threats faced by wild and domesticated flora and fauna.
e) To recommend an action plan which, if implemented successfully, could be used as an example in other relevant sites.

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VIII. MAJOR STRATEGIES TO FILL THESE GAPS AND TO ENCHANGE/STRENGTHEN ON GOING MEASURES

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5) DESCRIPTION OF THE METHODOLOGY USED IN THE PREPARATION OF THE SAP

1) The co-ordinator attended the Innaugural National Workshop at New Delhi on 23rd. and 24th. June, 2000.
2) A Local Area Committee (LAC) was formed, and LAC meetings were held on 6th Oct. 2000 at village Kurupam, and on 15th Oct., 2000 at the Nehru Yuva Kendra, Vizianagaram.
3) The co-ordinator visited LAC members at their hamlet/village/town and discussed the NBSAP in detail, with a focus on the role of that particular member.
4) The Telugu Call for Participation was widely distributed by the nodal agency.
5) A document on the local SAP process was prepared in Telugu with the help of an LAC member and distributed to district-level NGOs of the sub-state site.
6) Documents pertaining to relevant statistics and ongoing programmes that relate to biodiversity from various points of view were collected from district-level officials who were approached for this purpose.
7) Village-level meetings and consultations were held by the nodal agency at various sites with the help of relevant LAC members. The relevant TPCG member also actively attended a number of these meetings.
8) A number of meetings have been photographed.
9) Workshops conducted: A two-day adivasi workshop at Boddamanaguda, A workshop with 50 primary school teachers of Kurupam, Adivasi Food and Nutrition Workshop for the self-help youth groups, Thodu and Yamnaba, comprising mostly of adivasis.
10) Co-ordinator of the LAC, along with LAC tribal member attended the NBSAP Mid- term workshop in Delhi.
11) A series of consultations spread over ten days related to micro planning for the twin villages of Kurupam and Sivannapeta.
12) Questionnaire pertaining to JFM/VSS and some aspects of GCC projects were prepared and used to guide consultations. Documents provided by TPCG members were also referred to while preparing these questionnaires.
13) Questionnaire and simple format for project proposals pertaining to education were prepared and used to guide relevant consultations in addition to workshop discussions that were documented.
14) Questionnaire pertaining to micro planning was prepared and used to guide discussions during micro-planning consultations.
15) Relevant LAC member organized the first ever meeting of indigenous healers in the area to discuss issues related to medicinal plants and access and benefit sharing.
16) Co-ordinator of the LAC attended the NBSAP Southern Regional Workshop in Pastapur.
17) The assigned NBSAP TPCG (Technical and Policy Core Group) Member from the National-level Kum. V.Shruti Devi attended and helped to facilitate the first two LAC meetings, and a series of training and orientation sessions, including both the Adivasi Workshops, village consultations, meeting with indigenous healers and micro-level planning meetings.
18) In the course of the above mentioned proceedings, the following categories have been consulted: farmers, traders, adivasis, NGO activists, youth activists, mahila mandalis, panchayat and local self-government leaders and groups, VSS members, officials, indigenous healers, cattle breeders, vegetable growers, and a large umber of rural women, men, girls and boys.

II PROFILE OF THE AREA

1) GEOGRAPHICAL PROFILE *1,2

Area Size: 12. 362 Sq. Km. (Vizianagaram 6.539 Sq. KM & Srikakulam 5.837 Sq. Km)

Location: Bounded on the North-West by Orissa State
on the West and South by Visakhapatnam District
& on the South -East by the Bay of Bengal

Vizianagaram Latitudes: 17° 50 and 19° 15 of Northern Latitudes.

Longitudes 83° 00 and 83° 45 of Eastern Longitudes,

Srikakulam Latitudes: 18° 20 and 19° 10 of Northern Latitudes.

Longitudes 83° 05 and 84° 50 of Eastern longitudes,

The sub - state site has a long coastline extending over Vizianagaram (28 Km) & Srikakulam (192 Km) The total length = 220 Km from Echapuram Sands in Srikakulam District to Bhogapuram Mandal in Vizianagaram District. The Coast height is 5 meters - 50 meters. The sub-state site includes 22 fishing villages of Vizianagaram District and 104 fishing villages of Srikakulam District.

Towards the Orissa boarder, there is a forest area covering 1,11,978 hectors in Vizianagaram and 70,391 hectares in Srikakulam. The hill range extends from North - East to South - West, The average height of the hills is 914 meters. In some places there are hills that are upto 1,219 meters in height.

The forest can be broadly classified as moist deciduous which includes mixed forest, sal forest and hilly savannahs, dry deciduous which includes mixed forests thorn forest and scrub forest.

Important Rivers: *1,2

Vizianagaram	Srikakulam
Nagavali	**Nagavali**
Vamsadhara	**Vamsadhara**
Suvarnamukhi	**Suvarnamukhi**
Vegavathi	**Vegavathi**
Champacati	**Mahendra Thanaya**
	Gomukhi
	Champavathi
	Bhahuda

2) SOCIO-ECONOMIC PROFILE *1,2

1990-1991 Census

	Male	Female	Total
Vizianagaram	10,54,335	10,55,602	21,10,943
Srikakulam	11,50,609	11,67,306	23,17,915
Total	22,04,944	22,22,914	44,28,848

*3
2000 – 2001 Census

	Male	Female	Total	Density:
Vizianagaram	11,20,124	11,24,979	22,45,103	343Per Sq. Km
Srikakulam	12,56,370	12,72,181	25,28,551	433Per Sq. Km
	23,76494	23,97,160	47,73,654	

- Tribes present: Jatapu, Savara, Konda Dora, Gadaba, Muka dora, Manay Dora and Valmiki
- Dependent on Agriculture: 73% of the population.
- Other major occupation: Fishing. (126 fishing villages.)

The area enjoys a position of pre eminence in respect of crop production, particularly food grains. It is normally a surplus area of rice production. In Tribal areas, Adivasi Farmers depend on Jhum cultivation for growing Redgram, Jowar, Millets, Bajara and other crops.

***1,2**
3) POLITICAL PROFILE

This sub-state site consists of two districts (Vizianagaram and Srikakulam) out of the 23 districts of Andhra Pradesh State.

In Srikakulam District, there are three Revenue Divisions. These are Palakonda, Tekkali and Srikakulam. Vizianagaram District has two Revenue Divisions. One is Parvatipuram and the other is Vizianagaram. Thus, there is a total of 5 Revenue Divisions which are divided into 71 Mandals. The list of Mandals is as follows:

	Vizianagaram District		**Srikakulam District**
1.	Gummalaxmi Puram	1.	Itchapuram
2.	Kurupam	2.	Kaviti
3.	Komarada	3.	Kanchalli
4.	Jiyyammavalasa	4.	Sompeta
5.	Garugubilli	5.	Mandasa
6.	Parvatipuram	6.	Palasa
7.	Makkuva	7.	Vajarapu Kotturu
8.	Seetanagaram	8.	Nandigam
9.	Balijipeta	9.	Tekkali
10.	Bobbili	10.	Santa Bommali
11.	Terlam	11.	Tota Bommali
12.	Badangi	12.	Jalumuru
13.	Pachipenta	13.	Sarava Kota
14.	Salur	14.	Pathapatnam
15.	Rambhadra Puram	15.	Milliya putti
16.	Gajapatinagaram	16.	Hiramandalam
17.	Bondapalli	17.	Kotturu.
18.	Chipurupalli	18.	Bamini
19.	Nellimarla	19.	Sitampeta
20.	Datturajeru	20.	Veeraghattam
21.	Gurla	21.	Palakonda
22.	Vizianagaram	22.	Vangara
23.	Donkada	23.	Regidi Amadalavalasa
24.	Poosapati Rega	24.	Santha kaviti
25.	Bogapuram		
26.	Kothavalasa	25.	Rajam
27.	S. Kota	26.	Narasanna Peta

28. Vapada
29. L. Kota
30. Jami
31. Gantyada
32. Mantada
33. Garividi
34. Marakamudidam

27. Polaki
28. Srikakulam
29. Gara
30. Anadalavalasa
31. Sarubhojjali
32. Boorja
33. Achevala
34. Ponduru
35. G. Sigadam
36. Ranastalam
37. Lavaru

The sub-state site covers the entire Parliamentary constituencies of Parvatipuram, Bobbili. and Srikakulam. It also touches upon parts of the Visakhapatnam Parliamentary constituency.

The sub-state site covers 25 Legislative Assembly Constituencies.

*4

Panchayatraj System

The A.P Panchayatrej Act 1994 governs the three tiered Panchayatraj institutions. The salient feature, as mentioned in the statement of Objects and Reasons are as follows:

1. There will be Gram Panchayats at the village level composed for members elected from the wards carved out on territorial basis and two nominated members;
2. The Sarpanch will be elected by the members of the Gram Panchayat, including nominated member;
3. There will be a Gram Sabha consisting of all electors in the village which will meet twice a year;
4. There will be a Mandal Panchayat to every Mandal composed of the members directly elected from the territorial constituencies carved out for the purpose. Member of legislative Assembly and Members of Parliament (Lok Sabha) and also the Member of the Rajya Sabha who is a registered voter in the Mondal;
5. The President is to be elected from among the elected members of the Mandal Panchayat;
6. The revenue Divisional officers, Sub-Collectors/Assistant Collectors and Presidents of Agricultural Market Committees will be permanent invites to the meeting of the Mandal Panchayat;
7. The Chief Executive will be called as the Mandal Panchayat Development Officer;
8. The powers and functions of the Mandal Panchayat will be on the lines of the Constitution Amendment Act an din particular, the Eleventh Schedule inserted thereby;
9. There will be a Mandal Maha Sabha consisting of all Sarpanchas of the Mandal and all the members of the Mandal Panchayat so as to provide necessary likage between the Gram Panchayats and the Mandal Panchayats; it will e held every six months and will be presided over by the President of the Mandal Panchayat;
10. There will be a Zilla Panchayat for every district consisting all members elected from the Mandals in the District and each Mandal will be territorial constituency for the purpose; the Members of Legislative Assembly and the Members of Parliament will also to be the Members of the Zilla Panchayat;
11. The Chairman of the Zilla Panchayat will be elected only by the elected members of the Zilla Panchayat;
12. The Chairman of the District Co-operative Marketing Society, Zilla Grandhalaya Samastha, District Co-operative Bank and the District Collector will be permanent invitees to the meetings;
13. The Chief Executive will be called the Chief Executive Officer, Zilla Panchayat;
14. There will be Seven Standing Committees for the Zilla Panchayat;
15. The Zilla Pranalika and Abhivrudhi Sameeksha Mandal in the present Act will be abolished and the planning functions will be exercised by the Zilla Panchayat through its Standing Committees;
16. The Chief Executive Officer will be work under the administrative control of the Chairman for the purpose of implementing the resolutions of the Zilla Panchayat;

17. The powers and functions of the Zilla Panchayat will be as enacted in the Constitution Amendment Act, particularly the Eleventh Schedule inserted thereby;
18. There will be reservations of seats of members as also the offices of Sarpanch, President, Mandal Panchayat and Chairman, Zilla Panchayats for for the Scheduled Castes, Scheduled Tribes, Backward Classes and Women as provided in the Constitution Amendment Act;
19. There will be an Election Commission for the conduct of elections to Panchayat Raj bodies headed by a person who is holding or has held an office not less in rank than that of a Principal Secretary to Government;
20. There will be a Finance Commission headed by a person who has experience in public affairs; and
21. The Andhra Pradesh Gram Panchayats Act, 1964, the Andhra Pradesh Mandal Praja Parishads, Zilla Praja Parishads and Zilla Pranalika and Abhivrudhi Sameeksha Mandals Act, 1986 and the Andhara Pradesh Local Bodies Electoral Reforms Act, 1989 will be repealed.

    This bill seeks to give effect to the above objectives.

Schedule V Adivasi areas are present in the sub-state site.

The 'Agency' area is divided into the Sub-Plan and non-sub plan. The sub – plan areas are under Integrated Tribal Development Agency.

4) ECOLOGICAL PROFILE *[1,2]

Climate:

The sub state site has a tropical climate with moderate diffusion of sub tropical weather. Humid to semi humid conditions prevail in the area.

Rain fall:

The sub state site is covered by two agro - climatic zones. One is coastal zone. South - West monsoon 1000 -1100 mm.

Temperature:

Max 33^0 - 36^0C & Min 26^0 - 27^0C. At times, the temperature raises up to 42^0C in the month of May.

Soil type:

Red soils with clay base pockets of acidic soils literate soils soil with PH 4 - 5

Natural Ecosystems: [5] Land

The main soils in the district are red soils sandy loans and sandy clay and they constitute 96% of the total area.

The area consists of three types of soils: red soils, alluvial soils and coastal sandy soils about 60% of geographical area is covered by red soil.

Forest Region:

Forest Types present :-
1. Moist deciduous forests.
2. Tidal forest in marine area
3. Topical Dry deciduous forest

Status of regeneration: (of the following from variations)

Sal:	Good establishment is good due to drying back effect
Mango:	Good
Tamarind:	Moderate
Soupe Nut:	Moderate

*5
TRADITIONAL CULTIVATION METHODS:

"The ryots of the district divide the agricultural year into three seasons, namely punasa, the period of the south-west monsoon, when the staple dry grains are sown; pedda panta, the regular wet-crop season from August to December; and payira, the period from November, to April when the second dry crop is raised with the aid of the north-east monsoon. The year is also divided into the 27 kartes or asterisms of the lunar zodiac, and the ryots commonly hold that each of these asterisms is the proper season for certain agricultural operations and believe that if, owing to want of rain or other preventing cause, that season is allowed to pass, the particular operation cannot afterwards be carried out with equal chances of success. The joint result is that (see p.151) cultivation operations some sort are proceeding for ten months out of the twelve. Tables of the dates of seed-time and harvest appear in G.O.No.784, Revenue, dated 15th September, 1897. The punasa crops are by far the most important, as they comprise cambu and ragi, the staple food of the mass of the people, and a failure of the South-West monsoon is a serious calamity.

Here there is cultivation and harvesting of some kind going on almost all the year. With the first good showers in May ploughing of dry lands and sowing of ragi and cambu is seed beds commences, and in June transplantation of these crops is in full swing. Even earlier than this, if showers have been received, gingelly has been sown. As soon as transplantation of dry crops is over, should the South-West monsoon set in, wet lands are ploughed and paddy seed sown. At the end of July paddy transplantation begins and continues through August. Hardly is that over when the ragi and cambu harvest commences and is carried on through September. Gingelly is meanwhile being reaped in August and September and Korra, Vuda and Samai in August. When the ragi and cambu is off the ground, dry lands are immediately prepared again and sown with grams and pulses – or a second crop of ragi or with cholam. Then follows the North-East monsoon in October, and very soon after that is over early paddy commences to be harvested. Ragi, sown at various periods, is being cut all this time. The big paddy harvest commences in November and extends into December. Then follows the cold weather cultivation of ragi, chillies etc. under wells, and the harvesting of grams and pulses. Indigo is sown as soon as the paddy is off the ground, and sugar-cane is harvested up to March. When this is over, it is almost time to sow gingelly again, so that in fact it is only for about two and a half months from March to May that agriculture of some kind is not proceeding to a considerable extent."

Crops Grown:

Paddy, Groundnuts, Mesta, Jute, Sunhemp Sesamum, Jowar, Bajra, Blackgram and Horticulture crops.

High Attitude Tribal areas:

Rain fall south west mansoon > 1400m

Soil types: Hills slopes undulating transported soils

Crops : Horticulture crops, Millets, Pulses, Chillies Turmeric and Pepper.

The area is divided into three natural divisions (1) forest and hill regions(2) plains (3) coastal regions.

*8
Forest Regions:

Status of soil erosion:

1) Topsoil is eroded due to biotic interference and podu cultivation.
2) Erosion due to gullies.

Growing stock forest type: Tropical dry deciduous forests
Sub type:

1) 5 A/c3 southern dry mixed deciduous forest
2) 53/cic dry sal bearing forests peninsular sal

Quality: III
Density: 0.4
Age Class: 70 to 80 years

Predominant species Sal shorea, robusta

Species	Botanical Name	Local Name
Top Canopy	Shorea robusta	Sal Guggulam
	Terminalia tomentona	Maddi
	Pterocur Pus Marsupium	Bigasa
Middle Canopy	Emblica Officinatis	Amla
	Diospyros Melaroylon	Beedi Leaves
	Gmeliva arborea	White Teak
Lower Canopy	Cassia auriculata	Tanners Cassia
	Xylia xylocarpa	Iron wood
	Lagerstrowmia parviblora	Nandi
Shrubs	Woodfordia floribunda	Fire flame bush
	Phoenex acqulia	Dwarj date palm
	Indigofera Pulchella	Siralli
Ground Flora	Achyrantham aspera	Herb
	Tribulus Terristris	Herb
	Pterologium iovdicum	Herb
Climbers	Butea Superba	Bel Palas

	Bauhinia rahili Acacia intia	Camals foot climber
Grasses	Aristida Setaeea Thysanolana maxima Cynodondactylon	Chippera gaddi Broom grass Hariali grass

Status of Natural Regeneration

	Sal	Good Establishment is good due to drying back effect
	Mango	Good
	Tamarend	Moderate
	Soap Nut	Moderate

Wild Life Present

Herbivores	Susscrobs Melarsus ursinus	Wild Boar Growth bear
Carnivores	Hyaena	Hyena
Reptiles	Ptyas Mucogus Python Molures	Ret Snake Indian Python
Birds	Gallus Sonnerhi Milvas Migrans	Jungle fowl Peria Kote

5) HISTORY

The two districts derive their names from their head - quarter's town's Srikakulam and Vizianagaram.

Srikakulam district was carved out in 1950, by bifurcating it from Visakhapatnam district.

In 1979, the Srikakulam district underwent major territorial changes on account of the formation of a new district with head quarters at Vizianagaram. This involved the transfer of Salur, Bobbili, Parvatipuram and Cheepurupalli old taluks to the new district of Vizianagaram. Portions of Visakhapatnam (S.kota and Kothavalas area) were included in Vizianagaram district.

III CURRENT (KNOWN) RANGE AND STATUS OF BIODIVERSITY

1) STATUS OF NATURAL ECOSYSTEMS AND PLANT/ANIMAL SPECIES

Please note that we have not attempted to compilel detailed information regarding the status of the Natural Eco-System. However, some highlights have been mentioned below.

Some important area:

Mahendragirulu, Medicinal Herbs and wild life and natural streams

Thoka Konda, Medicinal Herbs and wild life and natural streams

Angaradamma Konda, Medicinal Herbs and wild life and natural streams

Punyagiri, Medicinal plants and water fall.
Thatipudi, Water falls

Vattigedda, Medicinal plants

Gajapathinagaram Pelicans from Siberia at Logisa Banyan tree near MANAPURAM

Thelikunti Pelicans & Painted Birds near ITCHAPURAM

Kalingapatnam, Sea Shore

Baruva : Sea Shore

Dattirajeru : 2 Acres Banyan Trees (T. Burjuvalasa)

Bondapalli : 1 ½ Acres Banyan Trees (Geddapeta)

MEDICINAL HERBS AVAILABLE[*8]

1. Abrus precatorious
2. Abution indicum
3. Acacia nitotica ssp. Indica
4. Acacia catechu
5. Achyranthes aspera
6. Actnopteris radita
7. Adhatoda vasika
8. Aegle marmeios
9. Aerva lanata
10. Albizzia amara
11. Aloe indica
12. Alstonia Scholas
13. Andrographis paniculata
14. Argemone mexicana
15. Argyreia speciosa
16. Asparagus racemosus
17. Alangium lamarckii
18. Acacia torta
19. Bauhinda purpurea
20. Boerhaavia diffusa
21. Bombax malabaricum
22. Buchanania latifolia
23. Butea monosperma
24. Butea superba
25. Caesalpinia bonduc
26. Caessalpinia digyna
27. Caesearia elliptica
28. Calotropis gigantean
29. Canscora decussata
30. Careya arborea
31. Cassia alata
32. Cassia angustifolia italica
33. Cassia auriculata
34. Cassia fistula
35. Cassia occidentalis
36. Cassia tora
37. Catunaregam spinosa
38. Celastrus paniculata
39. Curuculigo orchioides
40. Cycus circinalis
41. Cyperus otundus
42. Datura alba
43. Decalepis hamiltonii
44. Eclipta alba
45. Euphorbia hirta
46. Ficus glomerata
47. Flueggea microcarpa
48. Gloriosa superba
49. Gmelina arborea
50. Gymnema sylevestre
51. Helicteres isora
52. Hemidesmus indicus
53. Holarrhena antidysentercia
54. Centella asiatica
55. Holostemma ada-kodien
56. Ipomoea mauritiana
57. Jatropha curcas
58. Jatropha gossypifolia
59. Mangifera indica
60. Mallotus phillippensis
61. Mimosa pudica
62. Mucuna pruriens
63. Myristica fragrans
64. Ocimum basilicurn
65. Ocimum sanctum
66. Phyllanthus amarns
67. Plumbago roses, Plumbagao Indica
68. Plumbago zeylanica
69. Psoralea corylifolla
70. Pueraria tuberosa
71. Rauvolfia serpentina
72. Sida cordifolia
73. Siegesbekia orientalis
74. Solanum xanthocarpum (Solanum Surretense)
75. Sphaeranthus indicus
76. Syzygium cumini
77. Terrninalia arjuna
78. Terminalia belerica
79. Tinospora cordifolia
80. Tragia involucrate
81. Tribulus terrestris
82. Trichosanthes cucumerina
83. Ventilago madraspatana
84. Vernonia cinerea
85. Withania somnifera
86. Woodfordia fruticosa
87. Xanthium strumanum

EXTRACTS FROM FLORA OF SRIKAKULAM

As indicated earlier, 947 taxa (including naturalised exotics), mostly Angiosperms and a few non-flowering plants, have been collected, studied and presented in the book. The angiosperm collections represent 537 genera, classified into 137 families. The details of representative number of taxa, genera and families under different groups are given below :

	Family	*Genera*	*Species*
Total Collections :	161	565	947
1. Lichens	1	1	1
2. Liverworts	1	1	1
3. Mossess	3	3	3
4. Pteridophytes	16	20	23
5. Gymnosperms	3	3	3
6. Angiosperms	137	537	916
a) Dictos	114	417	731
i) Polypetalae	65	189	329
ii) Gamopetalae	30	157	282
iii) Monochlamydae	19	71	120
b) Monocots	23	120	185

The ratio among the family genus and species of the Angiosperms is as follows :

	Family	*Genera*	*Species*
Angiosperms	1 :	4 :	7 (Approx)
Dicots	1 :	4 :	7 (Approx)
Ratio between Monoots : Dicots	1 : 5	1 : 3	1 : 4

The genus / species ratio for the Angiosperms in Srikakulam District is approximately 1 : 2 whereas the genus / species ratio of the entire Indian sub-continent is 1 : 7, thus confirming the general.

TABLE 6

An analysis showing order of Dominance of Nine Angiosperm families in the various floras.

Family	Sequence as worked Out for Srikakulam Dt	Sequence as worked Out for Madras Presidency (sensu lato) (Gamble et al)	Sequence as worked Out for Bihar and Orissa (sensu lato) (Haines)	Sequence as worked Out for British India (sensu lato) (Hooker f.et al)
LEGUMINOSAE *(sensilato)*	I	I	I	II
POACEAE	II	II	II	III
EUPHORBIACEAE	III	V	V	V
ASTERACEAE	IV	VII	IV	VII
RUBIACEAE	V	III	VIII	IV
ACANTHACEAE	VI	IV	VI	VI
CONTROL VULACEAE	VII	--	--	--
CYPERACEAE	VIII	VIII	III	VIII
LAMIACEAE	IX	IX	IX	IX

rule that within a floral region, the smaller the flora, the limited would be the genus / species ratio.

For purposes of general comparison, of dminant families. Data as available from the Flora of British India (Hooker f.et at 1872-'97), Flora of Presidency of Madras (Gamble et a., 1915-'36) and Botany of Bihar and Orissa (Haines 1921-'25) is used to understand such of the families whose distribution is normally quite extensive. The sequence of nine dominant families from Srikakulam District flora, based on the number of species, is presented under the first column of the table 6 and compared it with the corresponding position occupied by each such family in other floras of the region.

The analysis given in the table 6, indicates interestingly that the family Leguminosae (*sensu lato*) comes out first as most commonly represented and well distributed family not only of the district expect in British India Where Orchidaceae occpies such position. This is rather due to a heavy representation of the species of three independent families, Fabaceae Caesalpinaceae and Mimosaceae (as classified at present) under Leguminosae (sensu lato) and as such it occpies the second place even for British India. In fact this is not appropriate when compared to other individual families in the sequence, but in view of the availability of the sequence for such mixed family in the earlier floras, for purposes of general comparision only, it is followed here. Poaceae is another dominant family, occupying second place in all the regions including Srikakulam district and a third place even for British India. It is rather interesting that due to good collection of the members of the family Convolulaceae, it is well represented in Srikakulam district and thus assigned to the VII place while it is not included at all in the first nine dominent families for other regions.

Seventeen families of Angiosperms as given present 15 species or more in the district and their order of dominance is given below along with the number of genera.

S.No.	Families	No.of Genera	No.of species
1.	Fabaceae	32	86
2.	Poaceae	50	77
3.	Euphorbiaceae	22	48
4.	Asteraceae	2	34
5.	Rubiaceae	19	34
6.	Acanthaceae	19	34
7.	Convolvulaceae	9	28
8.	Cuperaceae	8	23
9.	Lamiaceae	12	20
10.	Verbenaceae	9	18
11.	Orchidaceae	12	17
12.	Malvaceae	9	17
13.	Apocynaceae	9	17
14.	Caesalpinaceae	7	17
15.	Mimosaceae	7	17
16.	Scrophulariaceae	9	16
17.	Tiliaceae	3	15

It is rather interesting that Fabaceae (one of the composite family Leguminosae), occupies the first position and this indicates the wide range of growth and distribution of the various members of the family in the deciduous forests of the Eastern Ghats.

An analysis of the well represented/dominant genera in the district as given below, indicates that as many as 17 genera have 6 or more species.

S.No	Genus	No. of species
1.	Crotalaria	15
2.	Ficus	11
3.	Cyperus	10
4.	Eragrostis	Each
5.	Euphorbia	"
6.	Phyllanthus	
7.	Grewia	8
8.	Desmodium	
9.	Indigofera	
10.	Cassia	
11.	Dioscorea	
12.	Polygonum	7
13.	Acacia	6
14.	Hedyotis	each
15.	Solanum	
16.	Ipomoea	
17.	Leucas	

*6

FAUNA

Indiscriminate discussion of forests has resulted in the disappearance of many species. Among the carnivorous animals, the tiger is almost extinct but leopard, hyena bear and wolf are occasionally seen in the forest. The herbivorous class is represented by the sambar and spotted dear or chital. Few elephants are occasionally seen in the forest. Peacock, jungle fowl, pigeon, parrot, myna, ghose etc are common. Pelican birds are seasonally found in Tenineelapuram of Tekkali region.

2) STATUS OF AGRICULTURAL ECOSYSTEMS AND DOMESTICATED PLANT/ANIMAL SPECIES AND VARIETIES

Please note that we have not attempted to compile detailed information regarding the status of the Natural Eco-System. However, some highlights have been mentioned below.

Some Highlights:

Uddanam :	Coconut Plantations
Bhavanapadu :	Fish Harbour (Fisher foke villages 110 and Twenty thousands house holds depending on that)
Nowpada :	Salt Factories
Ichapuram :	making of Coconut Coir
Palasa :	Cashew
Kusimi (Seethammapeta) :	Pineapple and Fruit Plantations
Alamanda :	Mango Gardens
Agency area :	Hill Bannana, Jack fruit, , Medicinal Herbs & Podu Cultivation (Redgram and Millets etc,)

LIVE STOCK DETAILS * 1,2

	SRIKAKULAM			***VIZIANAGARAM***		
Name of the Livestock Species	**1983**	**1987**	**1993**	**1983**	**1987**	**1993**
Total Cattle	502521	522370	560237	405608	434375	428843
Male over 3 years	149952	159948	211726	173197	190932	198507
Female over 3 years	205300	188538	194162	133523	129799	128373
Young Stock	147269	173884	154349	98888	113644	101963
Total Buffaloes	235418	221625	204390	224077	259041	254261
Male over 3 years	131456	120037	98494	78305	78266	68288
Female over 3 years	60680	61062	53595	84513	112700	111558
Young Stock	43282	40526	42301	81259	68075	74415
Sheep	274024	195066	231334	208207	219440	208946
Goats	133356	124125	123872	135434	152881	131209
Horses and Ponies	83	94	32	59	74	42
Pigs	41663	33554	31886	52143	43006	39060
Other live stock	113	238	91	186	269	123
Total live stock	1187198	1097072	1151764	1025711	1109086	1062484
Total Poultry	1120724	1099432	1110760	1044185	1225120	1541707

FISHERIES *2 **VIZIANAGARAM**

INLAND FISH PRODUCTION

(In M. Tonnes)

Sl no	Name of the Species	1995-96	1996-97	1997-98
01	Barbus	100.00	120.00	130.00
02	Carbs	15.00	17.00	18.00
03	Cat Fishes	51.00	53.00	55.00
04	Murrel	200.00	210.00	220.00
05	Mullets	150.00	200.00	210.00
06	Prawns	14.00	15.00	16.00
07	Hilsa	-	-	-
08	Miscellaneous	27000.00	28000.00	30000.00
	TOTAL	**27530.00**	**28615.00**	**30649.00**

FISHERIES *1 **SRIKAKULAM**

INLAND FISH PRODUCTION **IN TONNES**

l. NO	Name of the Species	1993 - 94 In Tonnes	1994 - 95 In Tonnes
01	Barbus	3.78	5.04
02	Caryes	3087.00	4410.00
03	Cat Fishes	164.64	236.02
04	Murrel	493.92	705.06
05	Mullets	204.96	292.08
06	Prawns	82.32	117.06
07	Hisla	40.32	57.06
08	Miscellaneous	37.38	53.04
	Total	**4114.32**	**5877.06**

FISHERIES [*2] **VIZIANAGARM**

MARINE FISH PRODUCTION

(In. M. Tonnes)

Sl no	Name of the Species	1995 – 96	1996 – 97	1997 - 98
01	Blasmobranches	150.50	475.00	332.75
02	Cat Fishes	6.50	82.00	71.00
03	Leasser Sardines	4120.00	3850.00	4240.00
04	Other Hilsa	140.00	-	-
05	Anchovies	20.00	-	-
06	Sourds and Sourlus	10.00	-	-
07	Parches	11.00	-	11.50
08	Polyanennids	10.00	-	228.00
09	Scianacids	9.00	-	21.00
10	Ribbon Fish	1300.00	116.50	188.00
11	Caranes	15.70	213.00	232.00
12	Ponfiets	10.00	-	-
13	Mickerel	7.00	-	1685.50
14	Saer Fish	10.00	345.00	230.00
15	Penacid Prawn	2200.00	40.00	390.75
16	Non-penacid Prawn	2630.00	170.00	437.00
17	Miscellaneous Fish	7100.00	1140.00	1217.00
	Total	**17749.70**	**6431.50**	**9284.50**

FISHERIES [*1] **SRIKAKULAM**

MARINE FISH PRODUCTION

(in Tonnes)

Sl no	Name of the Species	1993 – 94	1994 - 95
01	Blasmobranches	64.867	46.915
02	Cat Fishes	83.450	33.616
03	Leasser Sardines	21.950	5.520
04	Other Hilsa	61.40	6.600
05	Anchovies	37.400	27.000
06	Sourda and Sourlus	-	-
07	Parches	74.900	11.600
08	Polyanennids	-	-
09	Scianacids	-	-
10	Ribbon Fish	370.350	39.440
11	Caranes	-	-
12	Ponfiets	162.250	19.950
13	Mickerel	170.660	11.100
14	Saer Fish	162.150	22.350
15	Penacid Prawn	109.350	36.950
16	Non-penacid Prawn	310.650	53.600
17	Miscellaneous Fish	3624.750	1721.301
	Total	**5254.137**	**2035.942**

Land use and land coverstatistics (problematic and wasteland areas)

Please note that areas marked as "Waste land" by the Government actually contain biodiversity.

Wasteland particulars	Srikakulam	Vizianagaram
Salt affected area	---	---
Water logged area	350	---
Marshy swampy area	2638	---
Gullied ravindus area	---	---
Land with or with out scrubs	46888	65640
Sandy area	1788	25
Barren stoney shatroc area	---	---
Total waste land	**51664**	**65665**

***1,2**

LAND USE AND COVER STATITICS RIVERS AND OTHER SOURCES

	Srikakulam	Vizianagaram
1, River and reservoirs	11562	13
Lakes, reservoirs and cannels	2063	8357
Total bodies	13625	8370
Land put to non-agriculture use		
Area under mines	---	---
Salt pans	2375	---
Grass and arising lands	---	---
total geographical area	583700	653900

***6**

CULTIVATED AREA	SRIKAKULM	
Total area	10,85,218	acras
Horticulture	1,11,000	acras
Prominent crop: Cashew	37,000	acras

Cashew is cultivated in the following Mandals: (Sompeta, tekkli, k.bommali, seetampeta, vajrapu kotturu, etcharla and ranastalam)

***6**

DETAILS OF THE SALT AND CHANNELS IN SRIKAKULAM DISTRICTS.

Srikakulam 2,650 acras
Covering area
Yielding 1,25,000metric tonnes of salt per annum

IV. STATEMENT OF THE PROBLEMS RELATING TO BIODIVERSITY

2) PROXIMATE CAUSES FOR LOSS OF BIODIVERSITY

WILD PLANTS

a) Felling of trees in forest due to commercial influences from the out side world , felling of trees in forest areas for agricultural purposes (Not for podu).
b) Decrease in the number of large trees due to the reasons mentioned above has led to the decrease of plants in the lower layers, including medicinal herbs and aromatic plants.
c) Soil erosion on the hill slopes due to loss of large trees, grazing, has effected the floral diversity on the foothills.
d) Over harvesting of N.T.F.P for newly introduced commercial utilization. This pertains to NTFPs that were not utilized by local populations in dally lives in the past. For example gum Karaya and Naramamidi chakka.
e) As and when alternative materials have been found for a particular use, the demand for the original material has receded, and along with it, the original material is not conserved for use as earlier. For example the influx of asbestos sheets for roofing has led to the decrease in the member of grass roots. With this, no special attempts made, to conserve the grass. The past there were special techniques to conserve this grass.
f) Commercial utilization of NTFPs without introducing matching system for re genaration of the NTFPs being used .
g) Destruction of some trees such as marking net Kannuga, Amla(Usiri) etc., due to natural pest.
h) Change in perception of scared grosses in some cases.

Domesticated Plants:

a) A small number of high-yielding varieties have replaced a large variety of traditional crops. (This mainly applies to the non-tribal areas). For example cotton introduced in the late 1990s to replace Mesta, Blackgram, sesame etc.,
b) Traditional crops such as red gram which fetch a greater price in the outside market are grown to the exclusion of other traditional crops such as ragi for which there is not much demand in the market outside. (This applies to tribal as well as non-tribal areas).
c) Introduction of monoculture species such as cashew under developmental schemes, which are now being regretted by the people, NGO's and Government which were taken up due to lack of awareness.
d) Reduction in horticultural output from household kitchen gardens. This is due to: decrease in space set aside for kitchen gardens. Open space is gradually being used for other purposes in building living quarters; reduced availability of water; less time devoted to gardening by individuals.
e) Fewer flowers being growned in house hold gardens, as plastic flowers are now used for prayers and as garlands.
f) Introduction of chemical fertilizers and pesticides and genetically engineered crops such as Bt, cotton in Salur especially driven by govt. subsides, loans and policies have led to the reduction indigenous varieties of crops.
g) Destruction of Voosakonda, Panasabhadra crops in ragi and banana mainly due to elephants having in to this area from Orissa in recent times.
h) Cultivation of tobacco has decreased due to commercial crops introducing.

Wild Animals:

a) Hunting mainly in the summer season (for food not for commercial purposes)
b) Water scarcity in forest area due to lack of rains, drying up of watering holes and forest streams.
c) Loss of habitats (for details, please see section on wild plants)
d) Food and water poisoning for fishing and hunting. This influences entire eco system.
e) Killing of animals as it has now become a part of the diet of the local people.
f) Poison traps to prevent wild pigs from destroying crops.

Domesticated Animals:

a) Lack of fodder/ grazing grounds
b) Lack of shelter
c) Scarcity of traditional herbal and medicinal cures for cattle and poultry.
d) In the past individuals were assigned to look after entire herds of cattle old days. Today, lack of people willing to do this as young boys prefer to go to schools and opt for other occupations.
e) One of the main utilities of keeping cattle as for as the formers were concerned, was to use during as organic manure. For various reasons described else where, chemical fertilizers are being used. This is one of the reasons for formers opting fro fewer cattle.
f) Lack of water for cattle.
g) Poultry diseases.

Marine Biodiversity

a) Introduction of large, commercial trawlers.
b) Reduction in fishing net – eye size, which has been necessitated due to the influx of large trawlers.
c) Motorized craft, especially large vessels, lead to pollution of marine areas and subsequent destruction of marine diversity including sea turtles.
d) Chemical wastes and pollutions from factories and industries located in proximity to the shore lead to the destruction of marine life.
e) Locally, a member of communities and people who were not traditional fisher folk have also taken to fishing.

3) ROOT CAUSES FOR THE LOSS OF BIODIVERSITY

WILD PLANTS.

a) Commercialization of natural resources
b) Unsustainable models of development which have failed to ensure that natural-resource dependent communities be direct beneficiaries of value added to diverse traditional crops and species
c) Introduction of planning/developmental schemes without consulting local communities or making them aware of possible alternatives, and of repercussions of models introduced. (Lack of research and information available to the planners and implementers also)
d) Lack of transparency regarding schemes related to natural resources, which leads to the failure of these schemes/resources.
e) Destruction of the entire tree / plant while collecting NTFPs for commercial use.
f) Unintentional spreading of forest fires.
g) Cutting of trees during the flowering season. In resent times.
h) Non-local people do not know the system of the tribal norms and cultural biodiversity.

Wild Animals

a) Lack of food and fodder.
b) Water scarcity.
c) Pollution and poisoning of water.
d) Chemicals and poisons laded to food used while hunting.

Domesticated Plants

a) Lack of low commercial value of traditional varietiessuch as ragi jowar bajra and other millets grown in tribal areas due to decreasing demand in the outside market.
b) Using of high yield verities using for cultivation.
c) Government policies pertaining to loans and subsidies support chemical fertilizers and pesticides this has lead to the decline of traditional organic forming a associated traditional varieties.

Marine Bio diversity

a) Government declared Factory’s chemical zone is the cause of pollution of marine eco system.

V. MAJOR ACTORS AND THEIR CURRENT ROLES RELEVANT TO BIODIVERSITY

1) GOVERNMENTAL AGENCIES

- Integrated Tribal Development Agency (ITDA) holistic porgrammes implemented for the tribes since 1980.
- District Rural Development Agency (DRDA) Agriculture, Horticulture, Animal husbandry and self help groups actives implementing for the upliftment of the poor.
- Dist. Agricultural Depts. Control over fertilizers pesticides and agriculture crops development.
- Dist. Horticulture Depts.
- Dist. Fisheries Depts.
- Animal Husbandry Depts.
- Irrigation and Power Depts.
- Education Depts.
- Forest Dept. (Forest conservation, Acts implementation, wild animals protection and community forest management.
- Dist. Groundwater Authorities
- Pollution Control Board (one for both Districts.)
- Girijan Co-operative Corporation
- Agricultural marketing Society
- Dist. Poverty Initiative Project implemented by organization Velugu

2) NON-GOVERNMENTAL ORGANISATIONS

- SRI SEVA SAMAKHYA (consisting of 35 NGOs net work in Srikakulam District for voluntary action and joint planning and joint implementation.)
- DIST. BOTANICAL SOCIETY, Srikakulam for education awareness and training, case studies, and exposure visits for the Botany Students.
- YOUTH DEVELOPMENT ORGANIZATION (YDO) Network for Vizianagaram District. One representation from one Mandal doing activities for the rural people, the main focus of the activities is integrated health, nutrition, indigenous health practices, Cleaning and Green, sanitation ect.,
- ARDAR, Parapuram, Vizianagaram working with fisher folk
- YOUTH CLUB BEJJIPURAM, Srikakulam working with fisher folk.
- ROSES, Mundemkhal, Vizianagaram nodal agency for agriculture bio diversity activities.
- COMMUNITY DEVELOPMENT CENTRE, Rambhadrapuram, Vizianagaram working on Adivasi lively hoods.
- JANACHATANA working on Adivasi lively hoods and forest activities.
- ARTIC working on Agriculture development
- ARTS working on JFM and Adivasi livelihoods

3) LOCAL COMMUNITIES (RURAL AND URBAN)

- Thodu (predominantly Jatapu tribal group)
- Yamnaba (Savara tribal group)
- Thanemem (Savara tribal group)
- Angarada (Adivasi Group)
- SAVARA YOUTH CLUB

Fishing communities, farmers, adivasis, cattle rearers, vegetable growers, indigenous healers.

3) DONORS

- Action aid	Networking and land issues
- Oxfam	Agriculture development
- World Bank	Health and poverty aleviation
- IGSSS	Agriculture development
- CWS	Joint forest management
- CARE INDIA (US AID & EC)	Health and Nutrition,Tribal Empowerment
- CEE	Environment education through schools.

-	CARITAS-INDIA	Disaster Management, Nutrition & Health
-	CRS	Health & Nutrition ,Food Security
-	CORD-AID	Tribal Development
-	SOMENEED	Watershed Management
-	BRED FOR THE WORLD	Community Empowerment
-	CAPART	Watershed Management
-	MISEREOR	Livelihood Security

4) INDUSTRY AND CORPORATE SECTOR: LOCALLY SITUATED INDUSTRIES IMPACTING THE AREA

- Veera Laboratories, Poosapatirega
- Proposed Industrial Growth Centre, Bobbili
- 3 sugar factories at Amdalvalsa, Bobbili, Bhemasingi
- Ferro Alloys: 3 in Vizianagaram Dist., 1 in Garividi, Srikakulam Dist.
- 9 Jute factories
- Cotton Spinning Industries, Vizianagaram
- A.P. tanneries Ltd., Nellimarla
- 130 Saw Mills
- Mineral Water Factories-Industries manufacturing plastic products.
- J. K. Paper Mills in bordering Rayagada, Orissa, pollutes the Nagavalli river.

Small scale and cottage industries impacting on Biodiversity & value addition

Ponduru:	Khadhi industries**.**
Bobbili :	Sitar, instruments manufactures.
Alamanda:	Mango jelly.
Itchapuram:	Coir items.
Palasa:	Cashew
Duppalapudi:	Wood toys.

VI. ONGOING BIODIVERSITY- RELATED INITIATIVES

1) BY THE GOVERNMENT INSTUTIONS:

- **Joint Forest management Programmes (JFM) i.e. Vana Samrakshana Samithis (VSS)**
- ‘’The forest department is promoting peoples organizations known as Vana Samrakshana Samithis for preservation and conservation of forests. The forest department has promoted the concept of VSS not only for providing avocation in also to inculcate the peoples participation for improving the potentiality of the new species, while enlightening them in regular meetings. The VSS members may be driven to show main thrust on plantation, Nursing, Preservation and procurement of NTEP {including medicinal plants}. Which would pave way for generating more income to Tribe’s.
  The forest department may extend its helping land in identification and training of the tribal members for promoting medicinal plants and marketing G.C.C is having the infrastructure for procurement and marketing the medicinal herbs collected by the tribal of substantiate the regular generation of income.’’
- **State Government's Clean and Green Programme**
  Voluntary action for environmental developments. This programme introduced by the state Government.

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- **Janmabhoomi Programme**

"Janmabhoomi must be viewed in the context of the government’s overall vision of the ideal society. A society where there would be multi-dimensional development of all the citizens; where there would be no poverty or inequity where people will be deeply involved in decision-making at all levels; where the government would truly be a service agency extending high quality service to the people; where there would be transparency and total accountability at all levels; where self-help, honesty, dedication, co-operation and hard work would be pervasive; where there would be greater efficiency in the utilization of our resources; where information technology would be extensively used for the benefit of the people and where, in short, growth, equity and excellence would be the guiding spirit of our activity.

We need to act on different fronts to usher in such a society. Members are aware of the efforts being made by this government in the field of information technology and administrative reforms. Janmabhoomi will be the movement which will deal with people and people-government interface. The movement will seek to bring people into the mainstream of development activity, and to usher in a people-centered development, bothe economic and social, for poverty eradication, and ensuring in the process equity, in social gender terms. The objective will be to maximize the decision-making by the people and to involve them in all stages of development activities. As part of the process, Janmabhoomi will seek to s\restore among people in all walks of life the concepts of dignity of labor, hard work, co-operation, service to fellow-beings, and above all, service to motherland, which as given birth to and nurtured us and to which we owe an eternal debt. The movement will seek to strengthen the local bodies so that they may play their role fully in integrating the people in the process. The movement will lay special emphasis on building awareness among the people. Janmabhoomi will also seek to provide the people with all relevant information through appropriate channels. This is borne out of the firm conviction that an informed community can make the right choices both at the individual and collective level. The movement will also seek to develop the inherent skill of the people, to enable them to reach their peak productivity levels. It will also seek to impart new skills that are required in a changing world. Yet another objective of the movement will be to demystify the governmental system, to simplify procedures and make the government more people-friendly."

- **Jalayagyam (voluntary action related to Water source development)**

- **CM's Empowerment of Youth** (grants to rural youth for self- employment up to one lakh. This scheme has violated national norms)

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- **Velugu Project (DPIP project)**

"In the context of the above analysis of the situation, the overall objective of the project would be to contribute to poverty alleviation by promoting a more effective and sensitive design in implementation of poverty alleviation interventions in the district and to introduce approaches which would be more responsive to the perceptions of the poor and build on their values of community participation and their grass roots institutions. The basic approach would be process oriented. The end result should be self-reliance of the poor.

Within this overall framework the specific objectives would be : (I) to develop sustainable grass-root village level institutions of the poor to plan for the group and implement programs for the group; (II) to identify and enlist the participation of motivated volunteers in rural areas; (III) to motivate young dedicated professionals to make rural development a career; (IV) to promote the formation of Self-Help Groups (SGH); (V) to improve the credit flow from the formal credit sector the poor through the SHGs; (VI) to assist the asset-less poor to acquire and manage assets; (VII) to assist the poor to improve their food security and livelihood requirements through increasing the productivity of the existing resource base."

- **Watershed Management Programme**

- **DWCRA (Dev. of Women and Child in Rural Area)**

Programme for Self-Help Groups socio-economic development by the Implementing agency District Rural Development Agency.

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- **Rythu Bazar Programme**

"The government of Andhra Pradesh has started the scheme of Rythu Bazar's in various towns of the state, where the farmers sell farm fresh products to the consumers with out the involvement of middleman. The sale rates in these bazaars are 15-20 times lesser then the prevalent retail rates. A cabinet sub committee monitor the working of the scheme. The scheme by the Chief Minister in Tele-conference with district collectors.

A similar scheme know as Apni Mandi Scheme was started by in Punjab in February 1987 where in the farmers sell farm fresh fruits and vegetables directly to consumers in Chandigarh and various other towns in Punjab.

The scheme was thereafter replicated in Haryana, Rajastan and also started in the state of Mizoram."

STATEMENT SHOWING THE LIST OF RYTHU BAZARS ESTABLISHED AS ON 26-04-1999 IN SUB-STATE SITE:

Srikakulam	2 Rythu Bazar	Ivliespuram junction in Srikakulam and Amudalavalasa.
Vizianagaram	4 Rythu Bazar	Old Maharaja hospital , R&B Guest house, Ganesh Temple and Ring Road Junction.

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- **Girijana Co-operative Corporation (GCC) Activities**

"Girijana cooperative corporative {G.C.C} Ltd established in1956 by the government of Andhra Pradesh to achieve socio-economic upliftment of the tribal is actively engaged in the fallowing activities.

1. procurement of Non-Timber Forest Produce{NTFP}and agriculture produce{AP} from the tribals and marketing of the same to the rest advantage of the tribals.

2. supply of Public Distribution System{PDS} supplies and other Domestic Requirements (DRs) to the tribal at fair and reasonable prices.
3. provision of credit to the tribal for seasonal agricultural operations. Medium and long term investments, consumption loans and Group credit to "Self Help" Groups.

Government support

The Government of Andhra Pradesh (GOAP) have vested monopoly procurement rights of NTFP with the corporation and waived forest rentals. Commercial taxes, and it is providing staff subsidy to the corporation.

Under "Remote Areas Development Programme" Rs.54 million was provided by the Government to GCC under this programme GCC intensified its purchases from interior areas. The range of items for procurement is increased and several new items are being procured for the first time.

At present GCC doing services for the two million tribes. Through a net work of two regional office 12 divisional offices. Its effected 45 Girijana Primary Cooperative Marketing Societies (GPCMs) and their 817 DR Depots, work in close cooperation with the nine integrated tribal development agencies of the state."

- **Integrated Tribal Development Agency (ITDA) Activities**

Holestick approach for tribal development coordinated point for all sectors of the development departments. ITDA is a umbrella organization for all tribal programmes.

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- **SwarnaJayanti Rozgar Yojana (SJRY) (Central Govt.)**

"The objective of SwarnaJayanti Gram Swarozgar Yojana is to bring every assisted family above the poverty line within three years, through provision of micro-enterprise. Quite often, one finds that even when a person is brought above the poverty line during a plan period, his / her income- may again fall below the poverty line in the next plan period. The poverty line in the VIII plan period was Rs. 11,000 per annum and during the IX plan, the poverty line varies in different States and ranges from Rs. 13,000 to Rs. 19,650 per annum. It is probable that in the next plan period the poverty line will be about Rs. 22,000 to Rs. 24,000 per annum. It must be ensured that the income of the Swarozgari under SGSY is such that the family income is above the probable poverty line of next plan period. To be on the safer side, therefore, that monthly income from the activity to be undertaken should not be less than Rs. 2000, net of repayment to the bank loan. This may not always come in the first year itself. As indicated, the objective is to see that the assisted family comes above the poverty line in three years. Therefore, the selection of the activities should be such that it would afford the Swarozgari an opportunity to expand his asset and skill base in three years and at least in the third year, the net income should be more than Rs. 2000 per month.

SGSY lays stress on cluster approach. What this means is that instead of funding diverse activities, each block should concentrate on a few select activities (key activities) and attend to all aspects of these activities, so that the Swarozgaris can draw sustainable incomes from thir investments. These key activities should preferably be taken up in clusters so that the backward and forward linkages can be effectively established. This would facilitate not only monitoring but more importantly provision of various services required by the Swarozgaris."

- **National Green Corp (Central Govt.)**

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- **Sustainable Tribal Empowerment Project**

Overall Objective : To improve the quality of life of the poorest and most disadvantaged members of tribal society in Northern AP, on a sustainable basis through community empowerment.

Project Purpose : To significantly improve health, education, income and food security of the target population through the establishment and strengthening of relevant community based organisations with the capacity to plan and manage the tribal people's own development agenda.

3) BY NON-GOVERNMENTAL ORGANISATIONS:

- Work done by the NGOs mentioned in section 2) above, primarily related to JFM, Community Biodiversity Registers (CBRs), implemented by the nodal agencies ARTIC and ROSES under Duccan Development society. The biodervisity register contained of Grama Sabha resolution, Gramasamacharam, Agricultural Information, Agricultural Diversity (Answering of 36 Questions), Glossary words and Social Map.
- Food and Nutrition, by CARE and YDO partnership, youth club of Bejjupuram, ARDAR and SNEHA working with fisherfolk. CARE-INDIA Partnership with NGOs prepared community managed Micro Level Plans in Tribal Area.

4) COMMUNITIES AND PEOPLE'S MOVEMENTS

- Partially successful protest against water pollution by Veera Laboratories by local fisherfolk.

- Partially successful protest by local people in neighbouring Visakhapatnam Distt. against the setting up of Birla Periclase factory.

- Public Interest Litigation: *Samatha Vs. State* (Srikakulam Distt.)

- Thodu, Yamnaba, Angarada and Thanemem groups are two self-initiated non-funded groups of Jatapu, Savara tribal and SC youth who have been working on conservation of wild life related issues, and creating of awareness. These are voluntary action groups promoted by one NGO. For substance of development, Peoples managed natural resource development.

- Zilla Jantu Sanshama sangham creating awareness on Animal welfare through meetings and exhibitions.

VII. GAP ANALYSIS

1) GAPS IN INFORMATION

a) JOINT FOREST MANAGEMENT (JFM/ VSS)

- Information regarding identification of location and fixing of borders for VSS sites was not dealt with appropriately or not given enough focus.
- People not made aware of all their rights under JFM scheme.
- All do not have access to information regarding VSS records for their site.

b) GIRIJAN CO-OPERATIVE CORPORATION (GCC) SCHEMES

- Tribals not aware of all their rights under GCC schemes.

- Tribals do not have a way to know prevailing/current/ seasonal market prices of NTFPs sold by them.

- Tribals not always aware of which items GCC has a monopoly over.

- Tribal not aware of how to add value to their raw material and to develop cottage industries, and especially not aware of the magnitude to which it should benefit them from the point of view of equity.

c) MEDICINAL PLANTS

- Indigenous healers not aware of which of the plants have been enlisted by the outside world.
- Gap in information due to the use of scientific terms, non-local languages while enlisting medicinal plants.
- Many healers not yet aware of all the threats faced by their profession with regard to patents etc.

d) DISTRICT-LEVEL EDUCATION (please refer to Education under Action Points for micro-planning ie Ch IX- 10, Page No.36)

2) GAPS IN VISION

a) JFM/ VSS

- Selection of Species for JFM was conducted with inadequate focus on biodiversiy concerns.
- No consultative planning on how much to harvest, and what percentage will be for the VSS.
- Not considered the rights of those who do not fall within VSS sites but who used to be beneficiaries of the same natural resources.
- When NTFPs are grown under VSS, then GCC would be buying them. Lack of inter-departmental co-ordination in terms of GCC's planning.

b) GCC

- GCC is focussing only on buying and marketing and not looking at sustainable growth.

- Not looking at long-term financial empowerment of adivasis.

c) MEDICINAL PLANTS

- Key actors had not addressed the issue of patents and IPRs in such a manner which would significantly benefit indigenous healers or their traditional patients.

d) DISTRICT- LEVEL EDUCATION (Please refer to Ch. IX-10, Page No.36)

3) GAPS IN POLICY AND LEGAL STRUCTURE

a) JFM/ VSS

The entire Vana Samrakshana Samithi hinges on a G.O. (Govt. Order) in the state of A.P. This creates a sense of insecurity, which is justified, going by specific instances in the sub-state site where the JFM/ VSS was cancelled by the govt., and the land put to other use.

b) GCC

The GCC should not have monopoly rights over NTFPs if it continues to function and to be structured the way it is.

c) MEDICINAL PLANTS

No legal structure exists, that is easily accessible to indigenous healers to protect their rights.

This is to be noted in the context of international and domestic developments in the field if Intellectual Property Rights. A system for benefit- haring needs to be worked out. In addition to this, indigenous healers do not have a license to practice, unlike Ayurvadic healers. As a result, their

activities of healing are technically illegal operations as of today. This needs to be corrected through relevant legislation/ rules, which recognize indigenous healers as legitimate healers. However, it would be important to create a system that can distinguish between traditional healers and quacks going into rural areas.

d) DISTRIC-LEVEL EDUCATION (Please refer to CH. IX-10, Page No.36)

4) GAPS IN INSTITUTIONAL AND HUMAN CAPACITY

a) JFM/ VSS

The state govt. has been employing a target-oriented approach in terms of the number of JFM projects underway, without the human capacity to support it from the side of the govt.

Forest Dept. has not used/ tapped the local citizen's capacity at various stages of decision-making and planning.

b) GCC

GCC as an institution should have a greater Adivasi presence. i.e. Adivasis should have more of a control and say in GCC planning as well as decision- making in a de-centralized fashion.

GCC should conduct training for building capacity among adivasis for value- addition to raw materials and to promote cottage industries, as this is an existing gap.

c) Medicinal Plants

Indigenous healers are currently unorganized and need to plan how to access and share benefits from their knowledge and supply of medicinal plants.

There is no co-ordination between healers and GCC regarding sale and use of 87 medicinal plants under GCC monopoly.

d) DISTRICT-LEVEL EDUCATON (Please refer to Ch. IX-10, Page No.36)

VIII. MAJOR STRATEGIES TO FILL THESE GAPS AND TO ENCHANCE/ STRENGTHEN ONGOING MEASURES

1. Creation of awareness regarding the value and importance of biodiversity conservation amongst various sectors.
2. Creation of awareness regarding local communities' rights over their natural resources.
3. Educating farmers regarding new threats faced by them. Eg.: The effect of genetically modified crops, chemical fertilizers, policies of muliti-national seed companies etc.
4. Creation of a regular co-ordination system/ network through which local citizens can analyze proposed and ongoing development schemes of the govt.
5. To promote traditional cultural practices aimed at celebrating and appreciating biodiversity.
6. To screen and monitor the impact of proposed and ongoing industries and so-called developmental activities.
7. To educate people so that their individual actions do not harm biodiversity.
8. To create a forum for Adivasi's which enables citizens to lobby for and legally demand their rights over natural resources.
9. To create a system which spreads local biodiversity related news and events across the two districts.
10. To enhance the livelihoods of natural- resource- dependent communities in a manner which gives an impetus to their traditional methods of biodiversity conservation. Eg., Through promotion of cottage industries.
11. To compile data regarding customary law and practices of all the tribes in the area with a focus on control over natural resources and gender roles.
12. To initiate selected models for specific activities based on consultations that have taken place. These "models" will primarily be for the benefit of the two districts.
13. To try and "mainstream" biodiversity issues/ concerns into Panchayat activities, and to try and ensure the efficient functioning of these bodies.

IX REQUIRED ACTIONS TO FILL THESE GAPS AND ENHANCE/ STRENGTHEN ONGOING MEASURES

1. Local Biodiversity Network:
   One local NGO each will co-ordinate a Biodiversity Network of NGOs and individuals belonging to each of the two districts. The aim of this network will be to indicate the need for, inititate or facilitate specific activities related to research, creation of awareness and education, and action pertaining to biodiversity conservation and local livelihood needs in the district. The process through which this is done will also generate the a substantial degree of awareness. The main focus will be on education and awareness aimed at various sectors. The aim is to create levels of awareness which will also snowball into independent behaviour and activities at individual, group, community, village and other political levels in the two districts.

   Proposed activities: Develop a panel of resource persons for imparting biodiversity- related knowlwdge, especially in the field of agricultural diversity, intellectual property rights and medicinal plants.

   Form a District Biodiverity Guiding Group (DBGG) co-ordinated by the same NGO that co-ordinates the District Biodiversity Network.

   Initial activities of the DBGG would be:

   Make a list of social organizers (individuals): One for a cluster of three mandals in the Distt. (Approx. 10 organizers for each district).

   Prepare or co-ordinate the preparation of a local awareness handbook and materials.
   The District Biodiversity Generation Handbook will be used to inform the mandal- cluster level social organizers. It will contain the following information in the local language:
   The meaning and value of biodiversity
   Brief outline of District, State, National and International trends regarding domesticated and wild biodiversity.
   Link between local people's livelihoods and biodiversity concerns.
   Ongoing initiatives by govt., NGOs, and citizens with special reference to the local area.
   Discussions regarding required actions in the local area.
   (The document will also draw from the sub-state BSAP and the minutes/ reports of the consultations held while preparing the local BSAP.)

   After this handbook is compiled or prepared, organize and conduct the first workshop for these social organizers.

   Co-ordinate and facilitate the first field workshops to be conducted by each of these social organizers. (At least one DBGG member must be present at each of these workshops.)

   DBGG will review the outcome of these workshops and chart its further agenda to facilitate and co-ordiante implementation.

2. ACTIONS FOR PERTAINING TO JFM.

BSAP consultations indicated the following:

At the start of the JFM project, the process was not consultative as it was meant to be, especially regarding boundaries for sites, specie selection etc.
There is no transparency regarding accounts regardless of the claims of the forest dept.
People were paid labour charges for working on their JFM sites, and this sole activity was sufficient to term their involvement as "participation".

The JFM scheme for each of the samithies hinges on a Govt. Order, which gives rise to a feeling of insecurity.
It is not a desireable system.
However, if it has to continue, the following needs to be done:

Regular public display of accounts. Responsibility will be taken by core service providers.
Complaints made should be widely publicised, even through the BSAP-proposed district- level Biodiversity Newsletter.
There should be a system of co-ordination with the BSAP-proposed Distt. Biodiversity Law Forum for required action if necessary.
For further points, please refer to suggestions from Adivasi Review Workshop described in (9) below.

3. **THERE SHOULD BE A DISTRICT BIODIVERSITY NEWSLETTER** to be brought out in Telugu as well as in English. [3000 Telugu copies and 2000 English copies.]
For the purpose, an editorial team of three plus editor, eight reporters, two photographers, one graphic artist (optional), one secretarial help, postage, translation and printing costs for a ten-page document to be brought out on a monthly basis would be required. This would be circulated free of cost or at a nominal cost. The fund will be generated by voluntary action with participatory methods.

4. THERE SHOULD BE A DISTRICT BIODIVERSITY LAW FORUM.
Immediate action to lead to the formal setting up of such a forum:
Organization of a Joint Bar Associations Workshop for the two Districts. Proposed organizers: Parvatipuram Bar Council in co-ordination with NBSAP TPCG member.
This would be a forum where those knowledgeable about natural resources in the local area and also the entire NBSAP informal net work could interest with the legal community through all the Bar associations of both Districts. This would build the capacity of the legal community. In addition to this capacities and infrastructure to enable interested members of the legal community to act as "biodiversity watchdogs" in collaboration with the people needs to be created.

5. PREPARATION OF LOCAL MEDIA PRODUCTS (FIRST STEPS):
Local Writers Workshop to be held to decide how to popularise biodiversity- conservation related views.
Labelling of trees in village areas using eco-friendly matrials. (suggestions required.)
Preparation of a roster of translators and support for these individuals on a requirement basis.
One workshop in each district for management- level persons from local newspapers to discuss the inclusion of features, news items and other columns on biodiversity- related issues on a regular basis in the local press.
Electronic Media Workshop for relevant persons to discuss the scope for preparing and inclusion of biodiversity- related programmes. Responsible institutions will be identified by the Executive Agency.

6. GIRIJAN CO-OPERATIVE CORPORATION (GCC) POLICIES:

Rather than there being a GCC monopoly through which GCC buys raw materials from tribals, there should be capacity- building for small- scale cottage industries at village and hamlet levels, and GCC should restrict its role to advertising such products, and facilitating the marketing of them in such a way that a large margin of profits reach the tribal community which should be able to make the decision of how to use the profits. This entire process should be transparent.

At present, the tribals need to be made more aware of the current list of NTFP items that GCC is buying from the tribals.

At the shanty- inspector stage, the problem is that the shanty inspectors do not give the proper rate. (There is a need for the tribals to have access to updated information on current rates of produce in the outside world.). Also, they do not always buy all the stock from the tribals. Stock gets rejected. Skill- training on how to collect certain NTFPs is required. There are problems with grading the quality of NTFPs which need to be addressed. There have also been instances of tribals being cheated through the use of faulty weighing instruments.

At the GCC DR (Daily ration) Depot level, ie., the salesman stage, the problem is with tribals receiving a low quality of products from GCC.
Capacity to store produce locally and add value or wait for a good price before selling is required. For this, detailed micro-level consultations are required to ascertain which cottage industry to

encourage in which hamlet or village. BSAP consultations have led to some suggestions which could be treated as pilot projects. Some details, which emerged from village- level consultations and especially from the Adivasi Review Workshop held on 25th Jan. 2002 at Bodammanaguda, are described below.

7. EXISTING FESTIVALS

One of the awareness and action-generating exercises of the proposed biodiversity net work described earlier would be to use existing local and tribal festivals such as harvest festivals to document, celebrate and generate discussion regarding traditional practices related to conservation.

An immediate starting point could be the baali panduga which is around the month of March. It is a nine-day festival of Jatapu tribals which takes place in each Jatapu tribal village. All varieties of seeds (red gram, jowar, bajra, ragi, green gram, black gram, paddy etc.) are put with mud in an earthen pot in a hut. Outside, dhoop of saal resin is used to pray to kulla devatas (non-Hindu), veedhi devudus (street gods). During this time, there are restrictions. The intipedda (big person of the house) has to fast. No oil is used during these days. If seeds in the mud pot germinate, then it is a sign that all is well with the earth, seeds, climate, water and air.

8. EXISTING SHANTIES

Linking with local shanties for various awareness exercises will be one of the immediate activities that could be taken up by the network.

9. MEDICINAL PLANTS AND INDIGENOUS HEALERS

In the first- ever meeting of approx. 40 indigenous healers of Vizianagaram District. as a part of the NBSAP (details to be attached as an Annex.), the following suggestion was made:

The healers would like to organize themselves into a body to try and protect their rights, and in turn, the rights of all those benefiting from their treatment.

They have agreed to hold a larger extended meeting to discuss this further, and have requested the local TPCG member to assist them with ideas and the required legal process, including guidance from others in the NBSAP process on forms of benefit-sharing.

At an immediate level, they also want to be able to be legally viewed/recognized as practitioners of indigenous medicine.

Furthermore, the GCC is buying 87 medicinal plants from all tribals (not only healers) at an extremely nominal cost. There is a need to not only raise nurseries, but to develop these extracts under the umbrella of the local healers instead of selling the raw material or the extract. Training would also be required for this. While doing this, access of traditional users to this treatment should not be hampered. A system of identifying and differentially treating these people would have to be worked out.

Even at the stage of documenting the information regarding medicinal plants, the local people are at a disadvantage because of the alien names used for the varieties, and they are never able to be aware first, of how much or how little the other person (researcher etc.) knows. (Even in the context of community biodiversity registers CBRs- , it has been noted during consultations, that lists are not always prepared in the most methodical fashion, and incorrect or incomplete lists could be counter-productive for a community.)

10. ACTION PLAN FOR TWIN VILLAGES OF KURUPAM AND SIVANNAPETA (MICRO-PLANNING)

The following sets of recommendations are a result of separate meetings with the relevant sectors in the village. Detailed descriptions of discussions at these meetings to be attached as Annexure. The specific recommendations are enlisted below:

DOMESTICATED DIVERSITY (ANIMALS) IN THE VILLAGE
The cattle breeding community which lives on the fringe of the village, not far from Schedule V forest areas, said that they are interested in introducing, on an experimental basis, a gobar gas plant in their street. However, it appears that the emphasis is on experimentation…field visits for them (women and men) to the closest neighbouring areas where this is already in operation could be a first step. The local NGO (NBSAP LAC co-ordinator) could facilitate.

Health requirements of cattle need to be further addressed.

Fodder, water and shelter needs of cattle have to be looked into, especially places for tying cattle at night which were available earlier are not available anymore.

DOMESTICATED DIVERSITY (PLANTS) IN THE VILLAGE

Horticulture: The vegetable- growing community agreed to:

Prepare compost pits with village garbage separately disposed of by each household, to be coolected and deposited by a Panchayat Van. (This will now have to be done).

Packaging and marketing of extra compost as organic fertilizers.

Seed banks to be prepared by involving KVK located near Rastakuntubai near Kurupam.

Groundwater Policy required as water level has fallen due to too many wells.

These vegetable growers use two particular wells in which the water level has fallen. Proposal to motorize these wells with solar motors.

Due to growing population, more vegetables need to be grown. Question of more land being required to grow vegetables- what does one do?!

Awareness and training needs to be created among vegetable growers, regarding new inventions, and their good and bad effect on vegetables, land and health.

Corresponding awareness needs to be created among consumers and citizens.

The horticulture department should be more pro-active, and appropriately inclined with regard to creating awareness, training, capacity building etc.

AGRICULTURE: THE RYTHULUS (FARMERS) SUGGESTED THE FOLLOWING:

Water: Existing Neetu Sanghas have to be contacted regarding clearing of tanks to increase groundwater level.

A Groundwater Policy should be implemented immediately.

A representative from the Agriculture Dept. should personally make regular visits in order to keep farmers informed of developmental schemes and for technical training sessions.

Seed bank to be maintained of all varieties: KVK to be involved.

Activists, scientists, experts etc. could come and create awareness regarding effects of new technologies. (This could now be done in collaboration with the proposed District Biodiversity Network).

PRIMARY EDUCATION IN THE VILLAGE (and applicable to the District, sub-state site and possibly, the state)

A combined centre-class in Kurupam Primary School was attended by about 50 primary school teachers. An inter-school debate, essay-writing and art competition on Nature and Biodiversity was held at the Z.P. High School, Kurupam. (Details to be attached)
The following recommendations emerged:

As of now, standards 3, 4 and 5 have Environmental Science I and EVS II. "Environment" falls under the EVS II paper for all three classes.
In this chapter, one should include aspects of Biodiversity as an integral part of "Environment"
This chapter should be carried forward in class 4 and 5.

There are two ways of doing this: First, and quicker to implement, is to train and make the teachers aware of aspects related to Biodiversity. They could then effectively introduce these aspects into ongoing discussions on "Environment" for which there is already a rpovision in the syllabus.
A suggestion must be made, to the District Education Officer (DEO) and/or to the Mandal Education Officer (MEO), to send people to train teachers accordingly during a regular Centre Class.

Under the EVS I paper, local geography is taught. Here, too, there could be localised teacher training so that even before it is introduced in the syllabus, teahcers could talk about local tribes and their livelihoods and lifestyles, including the value of indigenous knowledge.
The Second step of altering the syllabus would be time-taking, and the state-level process would have to look into it.

Every third Saturday, a Clean and Green Day programme is conducted. Through the Teacher Training Programme of this programme, Biodiversity could be included as a focus. (This could be immediately effective- but materials have to be prepared, such as the proposed District Biodiversity Handbook).

The example of a Feb. 2000 Science Fair which had been very successful was mentioned, and it was said that such a fair had taken place at all the Mandal Headquarters (approx. 30) of the district. In this village, which is a mandal headquarter, 20 schools participated. Rs. 4000 was given by the Education Dept., and 6,000 by citizens. Preparation time was one week. Therefore, such a fest. cost them a total of Rs.10,000.
A similar festival on Biodiversity for schools across the district could be planned and proposed.

At least four schools in and around Kurupam (list available) have sites for gardening/Nature activities. Extra-curricular activity teachers are required for this. The main problem is that the state govt. is not filling these posts.
The Education Dept. has to give directives for the filling up of these posts. Right now, even 'regular subject' posts are not being filled due to the lack of funds towrds education from the state govt. This is a problem that will have to be tackled at the state level.

Dance, including local tribal dances, including those celebrating harvests, biodiversity and Nature. There is a Govt. Dance School in the district headquarter (Vizianagaram). Tribal dances and songs are not being taught or popularised there at the moment, and could be included.

Libraries on Biodiversity would be useful, but no proper library exists. Initial provisions would have to be for a cupboard/ storage space with such books to which children could have access.

PROMOTE COTTAGE INDUSTRIES, WASTE RECYCLING, NATURAL COSMETICS, SOLAR COOKING IN THE VILLAGE:

Drawing from discussions with the young ladies of the village, the following suggestions were made:

Infrastructure for a centre to co-ordiante various cottage industries (to facilitate the proposed cottage industry efforts of surrounding tribal and other villages, and to promote appropriate consumer behaviour in the village) is required. Such a task could be facilitated by the local NGO (NBSAP LAC co-ordinator), but specific responsibilities could be assigned for each project. One of the new community centres in the village could be a venue for co-ordinating some of these activities.

They agreed that if the Panchayat Van were to collect kitchen waste to deposit at the vegetable grower's venue, it would be possible to dispose of paper, palstic/tin/glass etc and kitchen waste separately.

The paper could be re-cycled. Training for this, and marketing of the recycled paper products would be necessary.
Some items that had been made of recycled paper in the village were brought by two girls and shown to the nodal agency, with the offer to train others who might be interested.
As one of the first signs of implementation, it must be noted that the first voluntary workshop took place successfully on the 25th of Feb., 2002 for paper recycling as a result of the NBSAP process. It was attended by 25 girls from the village, and has generated a lot of enthusiasm.

An exhibition and sale of recycled products along with existing cottage industry products, with the aim of popularizing these is proposed. It will take approx. six months to prepare for such a "first exhibition" and it would take place in Kurupam village, and also in Visakhapantam city. The girls would be actively involved at every stage of planning and implementing the exhibition. Sponsors required for this. The NBSAP LAC co-ordinator could help to facilitate this.

Cosmetics: After a discussion on how chemical cosmetics packaged in various containers are now being used by many, and after appreciating and agreeing that natural cosmetics are preferable, it was said that many have stopped using natural cleansers etc. mainly because: It takes too long to prepare such things. Storing them is a problem, as they do not last long. Some of the ingredients (elements of biodiversity, sometimes from the kitchen garden) are not easily available, and many recipes are being forgotten.
It was proposed that, as here is no 'beauty parlour' in Kurupam (which is fast growing into a town). Someone could pre-empt the situation and set a trend by popularizing non-chemical nature products. A proposal for a weekly session of demonstration/ treatment on a very small scale has been made by a local volunteer. She has volunteered to initially host these sessions for friends and other girls in the village who might be interested, and to provide them with these preparations. This would have to begin as a free service. A list of items that she would require for one month has been provided to the nodal agency. These are mostly ingredients to be found in the forest or kitchen garden. This is at a very minimal cost, and individual sponsors could be looked for immediately. In the long run, links with tribals and other local people who could develop these items as cottage industries could be forged, and integrated into evolving action plans.

Solar Cooking: As some people in the village still depend on firewood from the nearby forest, the question of whether solar cookers was discussed.

Although solar cookers are available at a subsidised cost, people are willing to take the risk of opting for it only after observing over a space of at least one month, the working of a solar cooker in the village. This kind of a demonstration unit has to be set up in the village by the department of non- conventional energy.

The solar cookers that some people had seen were considered to be too large in size for a household that does not have a large terrace or area outside the house. Information was requested on whether smaller cookers exist, and if not, a suggestion that such ones be developed.

11. POINTS ARISING FROM CONSULTATIONS WITH FISHERFOLK

Network for fisherman communities
Prawn pickles making and marketing
Awareness on conservancy of fishery resources and marine resources
Protection from factories chemical zone

12. DETAILED SUGGESTIONS FROM ADIVASI REVIEW WORKSHOP:

The workshop was attended by persons from the following villages of Vizianagaram District:

Gottivada, Gunjarada, Boddamanaguda, Shantinagar, Kakitada, Udayapuram, Gujjuvai, Gujjubai Sivada, Mantikonda, Neradimanaguda, Daringpadu, Sampanagoda, Icchapuram, Sobba, Tolunguda, Kosinguda, Neelakanthapram, Gorada, Kurupam, Deppigoda, Rayimanaguda, Relliguda, Okkri, Yetamanaguda, Kottaguda, Marimanaguda, Damguda, Peddagottili, Baramaniguda, Gandhinagar, Chintalakuridi, Advalamguda, Sadunuguda, Kuntubai, Diguvuru. (more villages were there- list to be completed by nodal agency.)

Ten groups, consisting of approx. ten people each, were requested to fine-tune various aspects of discussion which have originated in the course of NBSAP consultations, including from the earlier Adivasi Workshop. These aspects were the broad issues which had been identified, and strategies, for example, the broad strategy indicating that instead of GCC and/ or others buying raw produce and NTFPs from the local people, they should prefer to develop small- scale cottage industries in their villages.
An attempt was made, to make a sample listing of required cottage industries and/or facilities for specific sites.

Workshop GROUP 1
This group dealt with Miscellaneous Suggestions for Cottage Industries in their villages.

Village Gujjuvai:

Tamarind: Training for de-seeding of tamarind required. GCC should not stop tribals from marketing de- seeded tamarind to others.
Cashew is a horticulural cash crop and has in many places replaced traditional crops This impinged on women's control over nutrition and resources, and was pointed out at an earlier meeting with the Mahila Mandali of Rasta Kuntubai). However, since it is being grown and sold, tribals should be able to sell this to the outside market and not to private dealers who come to them. Requirement: Storage and credit facility for the Mahila mandalis to do this. However, it was also argued by other non- tribal and tribal local leaders in the present workshop, that giving this responsibility to Mahila Mandalis was not the final solution, as the accountability will not be adequate. One should instead attempt, in the long run, to make the existing bodies such as the GCC, Panchayats etc. accountable.

Facilities for cottage industries for turmeric would also be appropriate in this village.

Village Sampannagoda:
Van/ transport facilities for marketing Cashew required.

Village Mavadimanaguda:
Van/ transport facilities for marketing Cashew required.

Village Darindpadu:
GCC should get us better rates for tamarind.

Village Bodammanaguda:
Cashew: Instead of selling to the middle-man, we require to be able to sell directly to the market.

Village Kedavai:
Turmeric: It is being sold to the middle-men. The community should be able to sell it directly to the outside market. Cashew: Storage facility and credit facility through Mahila Mandal required.

The above six villages also said that they could develop cottage industries for the following: nallajeedi (marking nut?), mushidikaya, yanduga pikkalu (for water purification), tamarind, mahua flower, mahua seed, kanuga pikkalu (an oilseed), neem seed, pulerupikkalu, naramamidi (traditionally liquor making- sealing material, for the outside world- aggarbatties, light weight toys etc out of the gum). At present, they do not get a reasonable price for these things. Training for developing the product, training and facilities for packaging (ecofriendly) and marketing required.

Workshop GROUP 2

This group discussed proposals related to Seed Storage.

Members of Kakitada, Diguvuru, Kottaguda, Rayimaneguda, Boddamanaguda and Gujjuvai villages listed some traditional forms of seed storage in their village, and said that these should continue, and should be encouraged to continue- it should remain condicuve to continue these methos of seed storage. In addition, they said that some of these methods could be popularised elsewhere, for which they could produce and market/devvelop the materials in the form of cottage industries:
Anapakayi is a kind of gourd which is dried and seeds such as korra biyam (ramdana?) are stored in it.
Ropes made of a variety of locally available grasses are made into bowls and seeds are stored in them.
A recipe of three ingredients (nalla jeedi, skin of drumsticks, and a particular ash) for storing red, green and black gram was described.
Bamboo containers are also used for storage.
For natural compost, tangedu leaves are used.

Workshop GROUP 3

This group discussed Honey.

Members of Gunjavada, Icchapram, Udaypuram, Gandhinagar and others dealt with this topic. Suggestions pertain primarily to these villages.

Right now, they are collecting Pedda Teni (honey collected by large bees) from the forest, and selling it to GCC at approx. Rs. 25 or 30 per 750 ml.
But there are two other types of honey (Borra Teni and Isukakarra Teni) in the forest which can be made using boxes. For this, training and materials are required such as honey box, filter, water pots for bees etc.)
Also, Chinna Teni (small bees) can be used here for bee-keeping.

Workshop GROUP 4

This group discussed How to Improve Development Schemes:
Members of Sampanagoda, Kuntubai, Chintalakurudi, Yeguva Kadavi, Mantikonda, Votaguda and Tolunguda participated in this discussion.

Adameswar Rao of Tolunguda said, "For all development programmes in our area to be successful, we need the co-operation of people from the outside world in various ways…also for progress, the local people should be able to control and benefit from the trees around them…in order for locals to understand any development scheme etc., everyone should be educated…education is a requirement…govt. development planners should be regularly available to village groups to know what they have to say."
The group added that when the govt. makes its plans, it should consult people in the villages.

Workshop GROUP 5

This group discussed Marketing Agricultural Products, Nurseries and Cattle.

Members of Yetamanaguda, Sampanagoda and others villages (list to be completed) contributed to this discussion. Suggestions pertain primarily to these villages.
An example of what is going on: They are selling one quintal of Kandulu gram at Rs. 800, whereas the outside rate is Rs. 1,200 per quintal.
There are other such rates for other products including ginger.
Therefore, a godown is required. One godown for ten villages will be appropriate.
This will give them time to find out current rates and sell to the party that gives the best rates. Right now, these agricultural products are being sold to whichever private dealer comes first, and at whatever rate is given.

Village Nurseries: There should be nurseries for fruit, plus training.
At one time, ITDA (Integrated Tribal Development Agency) had introduced satellite nurseries on small patches of land. These failed, and are not there. They failed because they were only target-oriented in the wrong direction. Eg., Rs. 7,000 was divided into instalments per satellite for planting outside varieties of mango only.
There should again be the staellite-nursery-type projects through ITDA, but of a variety of indigenous varieties, and the plan should be made after consulting the people. (ITDA will have a list of satellite nurseries that they had, with further details.)

Cattle: Earlier, each tribal village had 200- 300 cattle. Now, they are keeping fewer cattle because of non-availability of fodder from grazing grounds. If the forests increase, fodder will be available.

Workshop GROUP 6

This group discussed Pickles, Powders, Cosmetics, Mats

Members of Rayamanaguda, Gujjubai Sivada, Udayapuram, Damguda and others (list to be completed) participated in this discussion. Suggestions pertain primarily to these villages.

Requirements for processing and marketing: Training, loans, mills for powders etc. of the following products: Pickles: mango, tamarind, usiri (amla), drumsticks. Powders: red gram, turmeric, tamarind leaves, curry leaves, wild chillies. All these are organic, and grown without chemicals.
Members of Rayamanaguda also said they have materials for trifala, and support for developing and marketing this is required.

Cosmetics: These particular villages could develop aloe, soap nut for washing hair and bramhi leaves for washing hair.

Mats: Fibres available to make mats: jute, chamalnara, addanara, kumbinara, kondtomaranara and two types of tivvalu.
These can be developed further.
Currently, there are no govt. projects for these.

Workshop GROUP 7

This group discussed Oilseeds, Leaf Plates, Bamboo, Wood in the context of lopping for local products instead of other possible trends was also discussed.
Members of Relliguda, Kosinguda, Tolunguda and others villages (list to be completed) participated in this discussion. Suggestions pertain primarily to these villages.

Oilseeds: vippa (mahua seed for oil), kanuga, aamudamu, neem, valisalli, small-sized sunflower. These are the seeds available in the wild. In this area.
Cultivated: nuvvulu.

Local oil press and storage/ packaging materials are required.

Leaf Plates: Materials are available for making plates. The following leaves are used: adda leaves, modikakulu and gugilam (sal). To pruduce and market these for outside, leaf presses are required. Also, training for marketing is required.

Bamboo: Hen coops, vegetable baskets, seed storage and paddy baskets. For these, there is a demand locally (in forst villages). But the use of this should be encouraged. People in their own villages, must train more people to make and sell these products.

Regarding Wood: Trees which otherwise stand the danger of being cut for commercial purposes should be only lopped and there should be facilities to add value to this locally. The value thus generated should be much greater than the price of wood. Eg, from trees such as gumpi karra and yapi karra, small boxes can be made. Skill training for this should be given in the local area. Other types of wood relevant to these villages: tada, gummidi (wild teak?), gugilam (saal?)

Workshop GROUP 8

Members of Chintalakuvidi, Mamudimanaguda, Gottivada, Kuntubai, Sampanagoda and other villages (list to be completed) participated in this discussion. This group made the following suggestions:

Every night, there should be a meeting of the entire village to discuss who all are destroying forests, rates of crops and rates of NTFPs at various points etc.

Trees which were traditionally used for making huts are now disappearing. These trees should always be available. Now, people have started cutting other trees for building huts, and this should not happen. The traditional trees for hut-making should not disappear or reduce in numbers.

Workshop GROUP 9

This group discussed Aspects of Village-level Planning.

Members of Baramaniguda, Neradimanaguda, Neradivalasa and other villafes (list to be completed) participated in this discussion.

The following suggestions were made:

There should be village surveys for water sources plus biodiversity.

Only one village cannot make a plan by itself- the neighbouring villages should be consulted.

There should be grama sanghama with regular meetings. (village- level froups should exist) and be trained for making and implementing these plans. This should include plans to protect forests as this will bring rain and water. Water is most important.

Officials should be involved or linked up with these citizens micro-plans which are made.

Workshop GROUP 10

This group made specific suggestions for the working of GCC, VSS and KVK based on their experience. This was a group including non-tribal and tribal persons.

The individuals were: A. Koteshwar Rao, District Vice-President, Congress Party, M. Sushila, MPTC, H. Neelakanteshwar Rao, ex-MPP, T. Rama Rao, Teacher, Tikkabai, T. Appa Rao, ex-Munsif, Peddagottili, N. Muralikrishna, Press reporter, Andhra Bhoomi, A. Muralikrishna, Reporter, Andhra Prabha, Bh.V Ravikumar, Student.

GCC should give tribals proper rates.

GCC is buying limited varieties. It should deal with more varieties.

There should be Panchayat-level selling point for tribals. (Purchasing point from GCC perspective).

GCC should give tribals advance payment for collection of NTFPs.

Shanty inspector's role should be limited. Mahila Mandalis should buy from individuals and hand over to shanty inspectors.

At present, there are 800 DR (daily ration) Deptos. GCC should not hand this over to Pvt. Associations, and according to this group, not even to Mahila Mandalis as is being proposed. But there should instead be a fixed system through which Mahila Mandalis can monitor DR Depots.

VSS Vana samrakshana Samithies or JFM): There is mis-utilization of funds. There are no signs of plants growing anywhere through VSS.

Not only the VSS president, but all should know and decide regarding utilization of funds.

In the VSS committee, apart from the forest dept., there should be one member from any other dept. (eg., revenue, irrigation, horticulture, agriculture) in order to keep some sort of check on the forest dept.

KVK (Krishi Vigyan Kendra): KVK training is limited in terms of area covered.

Training via KVK should be extended to the entire tribal area.

Now, there are limited demonstration sites for limited crops. This should extend to other varieties.

There should be a stronger link between existing farmer's clubs in the districet and the KVK.

Research and training on indigenous varieties rather than monoculture of cash crops is required.

KVK should popularize organic fertilizers and pesticides and not chemical ones.

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