Science and Technology Resource Centre (STRC)

Gondwana University, Gadchiroli (GUG)

Sponsored by Rajiv Gandhi Science and Technology Commission, (GoM)

M.I.D.C. Road, Complex, Gadchiroli – 442605 (MS)

Vacancy Announcement

Science & Technology Resource Centre (STRC) is in search of competent individuals who can contribute, develop and manage programs, with need based support and collaboration of resource institutions and individuals. STRC is being funded and supported by Rajiv Gandhi Science and Technology Commission (RGSTC), Government of Maharashtra. STRC is located in the premise of Gondwana University Gadchiroli.

STRC mandate: Development of Human resource and appropriate technology for socio-economic growth linked to Forest and other natural resource based livelihoods such as NTFPs and its value addition, Aquaculture, and other livelihood means and concerns of the region. STRC will contribute by designing/catalyzing products, services and practices that deliver all round local area development in partnership with local communities. Further, STRC has functional autonomy incorporated in a formal agreement with Gondwana University Gadchiroli.

Jobs on offer are for **"Program Coordinators"** for various streams (02 posts) and **"Resource Persons and/or Visiting Fellows"**(02 posts). Please apply only through email to strc.gug@gmail.comby **31stMarch 2018, 05:00 pm.**

Details on essential/ desirable qualifications, job descriptions, remuneration, application form and procedures of applicationalong with the STRC Document are available on Gondwana University Gadchiroli website www.unigug.org

Science and Technology Resource Centre (STRC)

Gondwana University, Gadchiroli (GUG), Maharashtra State

Funded by Rajiv Gandhi Science and Technology Commission (RGSTC), GOM
(http://rgstc.maharashra.gov.in)

Invitation of application for the post of Program Coordinators/ Resource Persons on a purely contractual basis

Background:

Districts of Chandrapur and Gadchiroli in the south-east corner of Vidarbha are heavily forested, largely tribal and remain among the most underdeveloped in Maharashtra. Among various initiatives to help develop the region, Government of Maharashtra has set up Gondwana University at Gadchiroli (GUG) with jurisdiction over these two districts in October 2011.

STRC mandate: Development of human resource and appropriate technology for socio-economic growth linked to NTFP including bamboo, aquaculture, animal husbandry, food processing, and so on, and other livelihood means and concerns of the region. STRC will contribute by Designing/catalyzing products, services and practices that deliver all round local area development in partnership with local communities.

STRC has functional autonomy incorporated in a formal agreement with GUG.

As a center for sustainable value creation, STRC proposes five primary program streams: Production & Value Creation, Social Forestry, Research and Innovation, Academic Programs and Community Support.

IIT Bombay – CTARA and Bamboo Studio/IDC – has been identified as primary mentoring institution for STRC. Along with Forest Department, Gadchiroli, STRC has/will establish linkages with universities in the region – VNIT – Nagpur, MAFSU, DR PDKV – Akola, etc. as well as other institutions (MGIRI, Wardha) and reputed NGOs.

STRC is in search of competent individuals who can develop and manage programs and contribute with need based support and collaboration of resource institutions and individuals.

1. **Name of Posts:**
   i. Program Coordinator
   ii. Resource Persons (RP)

2. **Number of Posts:**

Job Position	No. of Post	Remarks
Program Coordinator	02	
RP1: Visiting Fellow RP2: General	02	Purely on contractual basis

3. Place of Work:

Science and Technology Resource Centre (STRC), Gondwana University, MIDC Road Complex, Gadchiroli (Maharashtra) – 442605.

4. **Job Profile:**

   i. The **Program Coordinators** are program leadership positions and would be responsible for efficient organization and conduct of the work of STRC relating to Natural Resource Management based program development, overall implementation of projects, relationship building with the stakeholders & so on. STRC can also assign any other work related to the centre.

   ii. The **Resource Persons** can be Subject Specialists (RP1) or Specific Resource Capable (RP2). RP2 candidates are responsible for organization of information / data base and its analysis, maintenance of repository of research work in forest based livelihoods, field work/research, & so on. TRC can also assign any other work related to the centre.

5. Educational Qualification and Experience:

   1) Program Coordinator
   Position 1:

   - **Educational Qualification (expected):-** Post-graduate qualification preferably in Botany, Forestry or Allied disciplines.

   - **Experience:-** At least 5 years of research and development experience in the field of Natural Resource Management and Biodiversity Conservation. Having wider expertise in NTFP scenario, and any of the disciplines such as ethno-botany, taxonomy, scientific cultivation and propagation of medicinal plants may be given preference.

   Position 2:

   - **Educational Qualification (expected):-** Post-graduate qualification in Wood-science & Technology or equivalent, Environment Management and Agri-Business/ Rural Marketing etc.

   - **Experience:-** At least 05 years of experience in Wood/ Bamboo technology, management and Marketing is strongly desirable.

   2) Resource Persons

   Category A – Visiting Fellow (RP1):

   - **SPECIFIC SUBJECT SIGNIFICANT EXPERTISE in any of the STRC core thematic areas with relevant experience-** Term of contract & remuneration will be decided based on what's on offer.

   Category B – General (RP2), Short time/Full time:

   - **Educational Qualification (expected):- U**niversity degree in Environmental Science/ Environment Management/ Environmental Laws and Policies, or Forestry is sought.

   - **Experience:-** 3-5 years of relatable experience in STRC's core thematic areas.

6. Period of contract:

The period of engagement for Program Coordinators shall be purely on contract basis for a period up to 1 year initially, extendable on annual basis based on performance review, etc. and terminable with one month's notice from either side.

7. Selection Process:

The selection will be on the basis of educational qualifications, relevant experience and interview. The short-listed candidates on the basis of their educational qualification and experience will be called for interview. Candidates with higher relevant experience would be given preference.

8. Compensation and perquisites:

The monthly remuneration/compensation for the two posts will be on a consolidated basis as indicated below:

Particulars	Program Coordinator (Both Positions)	Resource Persons (for Category B, RP2)
Consolidated Monthly Gross Compensation range	Rs. 45,000.00 to Rs. 60,000.00	Rs.25,000.00 to Rs. 30,000.00

No other facilities/perks will be given during the contractual engagement. Further, no residential accommodation will be provided by STRC and the contract appointee shall not be eligible for any superannuation / terminal benefits.

The amount of compensation being cost to STRC, will be inclusive of any statutory payments that STRC may be required to pay on behalf of the contract appointee. The contract employee will be liable for tax liabilities as per the Income Tax Act and Rules in force from time to time and the tax liabilities will be deducted at source wherever applicable.

9. Other Conditions:

a) All documents/ testimonials in original will have to be produced at the time of interview along with detailed Curriculum Vitae.

b) No travelling allowance will be paid for attending the interview.

c) Persons in employment will have to submit a certificate of release from their employer(s) at the time of their joining STRC.

d) Depending upon the requirement, STRC shall reserve the right to cancel/restrict/curtail/enlarge the panel of selected candidates or the recruitment process or to extend the validity period of panel, if need so arises, without any further notice and without assigning any reason thereof.

e) Contract appointee shall have no right or claim for any regular appointment in STRC.

f) STRC shall not furnish the deliberations of selection process to candidates.

g) STRC shall have the right to change / modify / alter any or all the provisions set out above.

h) In all matters regarding selection, Selection Committee's (STRC) decision shall be final and binding on the candidates and no correspondence shall be entertained in this regard from the candidates.

10. Application:

Eligible persons may send their duly filled in applications in the prescribed format (enclosed) **along with a one-page note on why you think you are eligible for the position by email:** *strc.gug@gmail.com* **addressed** to the **Chief Program Officer, Science and Technology Resource Centre (STRC), Gondwana University, MIDC Road Complex, Gadchiroli (Maharashtra) – 442605;**

The post applied for should be mentioned on the envelope.
Incomplete application in any respect is liable to be rejected.
The last date for receipt of application at STRC is 31st March 2018 (05:00 pm). Application received after this date may not be entertained.

Sd/
Chief Program Officer

Science and Technology Resource Centre (STRC)

Gondwana University, Gadchiroli (GUG), Maharashtra State

**Funded by Rajiv Gandhi Science and Technology Commission (RGSTC), GOM
(http://rgstc.maharashra.gov.in)**

Please affix latest passport size photograph here

The Chief Program Officer

Science and Technology Resource Centre (STRC),
Gondwana University,
MIDC Road Complex, Gadchiroli,
Dist. Gadchiroli (Maharashtra) – 442605

E-Mail*: strc.gug@gmail.com*
Website: *www.unigug.org*

Format for Bio-Data

1. Name in Full: Shri / Smt. / Kum. _____
   (In block letters)

2. Father's / Husband's name and occupation: _____

3. Post applied for: _____

4. Date of Birth: Date/Month/year

5. Place of Birth: Town/Dist./State

6. Marital Status: Married / Unmarried

7. Address for communication (in full)

_____

_____PIN_____

8. Permanent Address (in full)

_____

_____PIN_____

9. (i) Mobile Number/Alternate No

   (ii) E-mail: _____

10. Knowledge of Languages: .

Language	Can Speak	Can Read	Can Write

11. Educational Qualifications:

Examination Passed	College	Year	Examining Body / University	Principal Subjects	Class & Rank	Aggregate % of marks
Graduation						
Post-Graduation						
Others (Specify)						

12. Particulars of any special qualifications / training / experience in research/ working in NRM based projects/ on field exposure to Rural Marketing/ Agri-business etc.:

13. Qualification/proficiency in hands-on work on computers:

14. Particulars of present and previous employment:[*]

Name & Address of the employer	Period		Position & Nature of duties	Place of Posting	Total Emoluments (Rs)		Reasons for leaving
	From	To			Starting	Last Drawn	

* Please attach separate sheet, if necessary.

15. Particulars of any prosecution / conviction/ sentence against you awarded by any court of law for any offence.

Declaration

I declare that the particulars furnished above are true, correct and complete to the best of my knowledge and belief. I am not aware of any circumstances which might impair my fitness for engagement under STRC. In case, any of these particulars is found to be untrue later on, I shall be liable for the consequences thereof.

I undertake to be bound by the terms and conditions of the contractual engagement.

I have explicitly understood that this is an application for seeking contractual engagement only and in no circumstances confer any legal right to me to claim any post of profit/appointment in STRC.

Signature:

Place:

Date:

Warning:

i. Furnishing of false information or suppression of any factual information would be a disqualification and is likely to render the candidate unfit for employment.

ii. If detained, convicted, debarred etc., subsequent to the completion and submission of the form, the details should be communicated immediately to STRC, failing which it will be deemed to be suppression of factual information.

iii. If the fact that false information has been furnished or that there has been suppression of any factual information comes to notice at any time during the engagement of a person, his/her engagement would be liable to be terminated without any notice or compensation in lieu thereof.

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Detailed Project Report on

Science and Technology Resource Center (STRC)

at Gondwana University, Gadchiroli

Submitted to

Rajiv Gandhi Science and Technology Commission,

Government of Maharashtra

Submitted by

Dr Namdeo S Kokode

Convener, Experts Committee for DPR

[Sanction Order Ref. RGSTC/File-2013/CR-25, issued by RGSTC on May 20, 2013]

Director – BCUD, Gondwana University, Gadchiroli

September 04, 2013

Preface

Rajiv Gandhi Science and Technology Commission (RGSTC) in concurrence with Gondwana University at Gadchiroli (GUG) has taken initiative in proposing the Science and Technology Resource Center (STRC) under Gondwana University at Gadchiroli. For the region that is heavily forested, largely tribal and among the most underdeveloped in Maharashtra, RGSTC sees a realistic possibility of the STRC leveraging local resources, relevant knowledge and technology for capacity building for youth at different layers such as artisans, students and faculty for significant knowledge enabled development of the region.

In this context on suggestion of Dr Anil Kakodkar, Chairman-RGSTC, a two-day national workshop on the theme of "**shaping-up of STRC at Gadchiroli**", was hosted by GUG on January 18-19, 2013, supported by IIT Bombay, Forest Department-Gadchiroli and RGSTC.
As a follow-up, RGSTC constituted an expert panel to prepare a **Detailed Project Report** for setting up STRC at Gadchiroli. **The DPR is now being presented to the Commission, with a request to turn the proposal into reality at an early date – The region certainly needs this project for inclusive development.**

I take this occasion to thank Dr Anil Kakodkar, Chairman-RGSTC for the concerns shown and the initiative taken for this laudable proposal. Dr. V. S. Ainchwar, Honorable Vice-Chancellor of Gondwana University, Gadchiroli, not only supports the proposal but has given all round encouragement and help to get it going.

Prof A. K Misra, VC- MAFSU and Dr Ravipraksh Dani, VC-Dr PDKV have been enthusiastically supportive, and their respective staff have given very useful inputs. Mention is also made of Shri M. S. Farooqi, Director, Crafts Development Institute, Srinagar for sharing information on CDI and Dr Abhay Bang, SEARCH/NIRMAN, Shodhgram on issues of relevance to Gadchiroli District.

Prof. Devang Khakhar, Director-IIT Bombay has declared full commitment to the upcoming center; it is so very heartening. The Experts Panel has enjoyed the IITB hospitality during preparation of the DPR. Staff at Bambu Studio/IDC and at CTARA has also pitched in when required.

And there have been several others. The Experts Panel puts its appreciation on record for all the support. In closing, I hope we have been worthy of the trust shown by RGSTC.

On behalf of the Experts Panel
Dr Namdeo S. Kokode
Convener for DPR-STRC
Director-BCUD, Gondwana University, Gadchiroli
Maharashtra State

TABLE OF CONTENTS

Detailed Project Report on
Science and Technology Resource Center (STRC)
at Gondwana University, Gadchiroli

Executive Summary

Districts of Chandrapur and Gadchiroli in the south-east corner of Vidarbha are heavily forested, largely tribal and remain among the most underdeveloped in Maharashtra. Among various initiatives to help develop the region, GoM decided to set up Gondwana University at Gadchiroli (GUG) with jurisdiction over these two districts; it came into existence in October 2011.

Rajiv Gandhi Science and Technology Commission (RGSTC) in concurrence with GUG has taken initiative in proposing the **Science and Technology Resource Center (STRC) under Gondwana University at Gadchiroli.**

The prime focus of the center is on the forest produce and livelihood concerns of the region. The center will contribute by designing/catalyzing products, services and practices along with upgrading human resource that deliver all round local area development in partnership with local communities. This concept, recognized as **Sustainable Value Creation,** defines the core theme for STRC**.**

Appropriate technology - by itself and as an assist for the traditional way - shall be the backbone of the experiment. By experiment we imply a robust model that provides thrust for development that respects tribal/local traditions, that is well thought out and forward looking in terms of various issues –livelihood, conservation, sustainability, and so on.

As center for sustainable value creation, STRC as proposes five primary program streams**: Production & Value Creation, Social Forestry, Research and Innovation, Academic Programs and Community Support.**

Program Coordinators are to manage the streams, supported by Resource Persons. There is provision for need-based adjunct appointments at all levels. Head-STRC to be called "**Chief Program Officer (CPO)**" needs to be selected with due diligence given the nature of the assignment: A selection committee is proposed for the task.

The implementation of STRC is planned in two phases. **Phase 1** initiating the program with a skeletal staff and infrastructure, should take firm roots within a span of two years. **Activities center on the core theme of catalyzing Production and Value Creation**. The program manifests itself through applicable research, innovation and marketing, and academic initiatives that offer specially designed courses.

Phase II builds on maturing of the core program and the experience gained during Phase I to have a full-fledged STRC ready in five years as a planned outgrowth. STRC now has a well developed **Social Forestry** initiative. C**ommunity Support** program also gets established that will include short term certification courses, distance education, e-learning facility and so on; in addition has potential to transform the region with the concept **CILLAGE** - **An eco-system that incorporates the best of a city and a village - a development model for rural India**.

IIT Bombay – CTARA and Bambu Studio/IDC - has been identified as primary mentoring institution for STRC. Forest Department, Gadchiroli is already active in the region and its participation is considered essential. STRC will establish linkages with universities in the region - MAFSU, Dr PDKV-Akola, VNIT-Nagpur, etc. – as well as other institutions and reputed NGOs.

STRC is to have academic, administrative and financial autonomy incorporated in a formal agreement with GUG and approved by the management of GUG. Following modern management practices, the CPO-STRC under the GUG banner must strive for excellence given the operational autonomy and mentoring by frontline institutions.

The Budget Summary for STRC:

STRC at GUG (Rs - lakhs)		Non Recurring	Recurring	Total
Phase I	**Two Years**	488.30	334.04	**822.34**
Phase II	**Three Years**	236.80	584.04	**820.84**
Total Budget (5-Years)		**725.10**	**918.08**	**1643.18**

Excerpts from the Sanction Order for DPR-STRC

[Sanction Order Reference No. RGSTC/File-2013/CR-25, issued by RGSTC on May 20, 2013]

> **RGSTC has nominated the following experts panel for the DPR:**

    1)   **Dr N. S. Kokode, Director – BCUD, GUG → Convener**

    2)   Prof Milind Sohoni, CTARA, IITB, Mumbai → Member

    3)   Prof A. G. Rao, Bambu Studio/IDC, IITB, Mumbai → Member

    4)   Shri A. M. Patankar, Advisor, RGSTC, Mumbai → Member

    5)   Shri T. S. K. Reddy, CCF, Gadchiroli Circle → Member

    6)   Prof Dilip R. Peshwe, VNIT-Nagpur → Member

    7)   **Dr Prakash M Dolas, Advisor, RGSTC, Nagpur → Member-Coordinator**

> **Terms of Reference for the Panel:**

1. DPR should clearly bring out the organizational structure for STRC, programmes to be implemented over a five year project period and mechanism for programme implementation.
2. It should specify the role of the mentoring institution and other participating agencies.
3. It should provide the Budget Estimates for the project and possible resource mobilization from other agencies and institutions who are likely to participate.
4. It should bring out the expected outcome of the project and the arrangements for sustainable post-project activity.
5. It should clearly bring out the innovative technology content of the project and its linkage to the development process in the area.

List of Abbreviations:

BIAF-Research: BIAF Development Research Foundation, Pune

CDI: Craft Development Institute, Srinagar

CECP: Committee Encouraging Corporate Philanthropy, an International Forum of CEOs

CIVN: Center for Innovation, VNIT Nagpur (CIVN)

CTARA: Centre for Technology Alternatives for Rural Areas (IITB)

DPDC: District Planning Office and District Planning & Development Councils (DPDC)

Dr. PDKV: Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola

IDC: Industrial Design Centre, IITB

KONBAC: Konkan Bamboo and Cane Development Centre

MAFSU: Maharashtra Animal & Fishery Sciences University, Nagpur

MGIRI, Wardha: Mahatma Gandhi Institute for Rural Industrialization (MSME), Wardha

MKCL: Maharashtra Knowledge Corporation Limited

MSME: Ministry of Micro, Small and Medium Enterprises, GoI

NKN: National Knowledge Network

NTFP: Non-Timber Forest Product

RGSTC: Rajiv Gandhi Science and Technology Commission, GoM

SBK: Sampoorna Bamboo Kendra, Lawada (Melghat, Amravati Dist)

SEARCH/ NIRMAN: Society for Education, Action & Research in Community Health,

Shodhgram, Gadchiroli Dist

SINE: Society for Innovation and Entrepreneurship, IITB

VNIT-Nagpur: Visvesvaraya National Institute of Technology, Nagpur

Detailed Project Report on
Science and Technology Resource Center (STRC)
at Gondwana University, Gadchiroli

1. Introduction

Districts of Chandrapur and Gadchiroli in the south-east corner of Vidarbha are heavily forested, largely tribal and remain among the most backward in Maharashtra. Among various initiatives to help develop the region, GoM decided to set up Gondwana University at Gadchiroli (GUG) with jurisdiction over these two districts; it came into existence in October 2011.

Rajiv Gandhi Science and Technology Commission (RGSTC) and Gondwana University, Gadchiroli (GUG) have a focused interest in setting up the **Science and Technology Resource Center (STRC) under the Gondwana University, Gadchiroli (GUG).** RGSTC sees a realistic possibility of the Centre leveraging resources of the region and relevant knowledge and technology for capacity building for youth at different layers such as artisans, students and faculty for significant knowledge enabled development of the region.

This DPR endeavors to set in motion a process for realizing the STRC at GUG that shall become a paradigm for similar efforts elsewhere in the country.

2. Context and Project Rationale

2.1 Evolution of STRC Program till date:

- **September 15, 2012:** the birth of the concept – visit of Dr Anil Kakodkar, Chairman-RGSTC to Bamboo Studio in Industrial Design Center (IDC) at IIT-Bombay.

- **October 01, 2012:** Brainstorming session at VNIT-Nagpur, Chaired by Dr Anil Kakodkar with Dr V S Ainchwar, Vice-Chancellor, GUG, and several experts from the region participating.

- **January 18-19, 2013:** Two day workshop on **"Shaping of Science and Technology Resource Center (STRC) at Gondwana University, Gadchiroli: First Steps to CILLAGE in Gondwana region"** Organized by Gondwana University in association with Rajiv Gandhi Science and Technology Commission [GoM], IIT Bombay and Forest Department – Gadchiroli.

- **February26, 2013**: TOR for DPR document vetted by Chairman – RGSTC.

- **May 20, 2013:** Sanction for DPR preparation and nomination of the committee of experts.

- **June 18-19, 2013:** First meeting of the nominated experts was held at IDC, IIT-Bombay.

- **August 31, 2013:** Meeting of the nominated experts to finalize the DPR draft for submission to RGSTC was held at IDC, IIT-Bombay.

2.2 Program Context and Rationale

Districts of Chandrapur and Gadchiroli in the south-east corner of Vidarbha remain among the most backward in Maharashtra (~90 % students of GUG in some or the other reserved category). These two districts are heavily forested (75-80 % of Gadchiroli, ~60 % of Chandrapur) and predominantly tribal (~35 %). Among various initiatives to help develop the region, GoM decided to form Gondwana University at Gadchiroli (GUG) with jurisdiction over these two districts; it came into existence in October 2011.

On September 15, 2012, Dr Anil Kakodkar, Chairman, Rajiv Gandhi Science and Technology Commission (RGSTC), GoM, suggested initiating an education and development program based at GUG for sustained S&T enabled development of the region leveraging the abundant local forest resources. Matter was also discussed with Prof V. S. Ainchwar, VC-GUG. In this context, a brainstorming session with various stakeholders, including VCs of universities in the region, forest department, national institutions, and so on, was held at VNIT-Nagpur, presided over by chairman-RGSTC on October 01, 2012. After a few more rounds of discussions among various stakeholders, and at the behest of Dr Anil Kakodkar, it was decided to hold a two-day workshop

on the theme of "**shaping-up of STRC at Gadchiroli**", to be hosted by GUG and supported by IIT Bombay, Forest Department-Gadchiroli and RGSTC.

The workshop held on January 18-19, 2013 at Gadchiroli was a national event, with ~30 expert participants and presenters from across the nation as well as from within the state. GUG was represented by ~100 invitees. There were several exhibition stalls set up by participating institutions as well. (Brief report on the Workshop is attached to this document as Annexure.)

Terms of Reference (TOR) document for guiding the preparation of a Detailed Project Report (DPR) was ready by February 26, 2012, duly vetted by Chairman-RGSTC.

RGSTC Sanction Order Constituting the experts' panel and Terms of Reference for the preparation of DPR for STRC at Gondwana University, Gadchiroli was issued on May 20, 2013.

3. Project Concept, Objectives and Scope

3.1 Concept STRC-GUG:

➢ GUG and RGSTC recognize an opportunity in STRC to play a significant role in addressing fundamental societal issues—seeing those issues not merely as problems to be addressed through charity (a.k.a. handouts), but instead as the seeds of innovation and growth: The center will contribute by designing/catalyzing products, services and practices along with upgrading human resource that deliver all round local area development in partnership with local communities. This concept is recognized as **Sustainable Value Creation.** Accenture / CECP, 2011

➢ Studies show that exploitation of Non-timber forest products (NTFPs) could yield higher net revenue per hectare than would timber harvest of the same area, while still conserving vital ecological services. Their economic, cultural and ecological value, when considered in aggregate, makes managing for NTFPs an important

component of sustainable forest management and the conservation of biological and cultural diversity. ^{Wikipedia}

The central focus at ground zero for local area development shall be forest produce for/and value creation as livelihood resource through inclusive growth. In the given context, STRC is to leverage integrated development through applicable research, innovation and education, with catalyzing production and marketing as integral aspects of the core theme. **Appropriate technology** - by itself and as an assist for the traditional way - shall be the backbone of the experiment. By experiment we imply a robust model that provides thrust for development that respects tribal/local traditions, that is well thought out and forward looking in terms of various issues –livelihood, conservation, sustainability, and so on – and that unique character for STRC given association with frontline institutions.

3.2 Objectives and Scope

The broad objectives of the STRC as recorded in TOR document:

A. To recognize, record and augment local skills and traditional knowledge and to explore avenues for enhanced livelihood in the region.

B. To ensure sustainable and productive use of the forest and other natural resources of the region.

C. To be a regional knowledge resource for various state programs.

D. To ensure all-round development that is representative and inclusive through training and research.

E. To connect the districts of Chandrapur and Gadchiroli to the rest of the world, ensuring opportunities and markets for their people.

This Science and Technology Resource Center is mandated to help in local area development through the University route – i.e. GUG. There will be diploma and degree courses offered, as also short-term certification for varied training programs for artisans. Scope of activities within

STRC is wide: Local forest produce and value creation, year-round skills development programs, traditional technology interface, production and marketing technology initiatives, and so on. STRC is to support applicable research in core areas, faculty upliftment programs, strong extension program office that caters to continuing education and outreach programs, and so on.

IIT Bombay has been identified as primary mentoring institution for Program-STRC. Forest Department, Gadchiroli is already active in the region and its involvement in the program is considered indispensible. The program is expected to receive support from universities in the region - MAFSU, Dr PDKV-Akola, VNIT-Nagpur, etc. - and other institutions and reputed NGOs.

STRC should be granted academic, administrative and financial autonomy incorporated in a formal agreement and approved by Management Body of GUG; it is possible some of the activities may call for changes in the basic university charter.

STRC shall be a center for sustainable value creation.

This DPR addresses phase-wise establishment of STRC – initiating core program during Phase I for two years, and complete development in five years.

4. Science and Technology Resource Center [STRC]

The DPR proposes a configuration for a five year timeline. This Chapter deals briefly with the organizational structure of STRC.

4.1 Organizational set-up
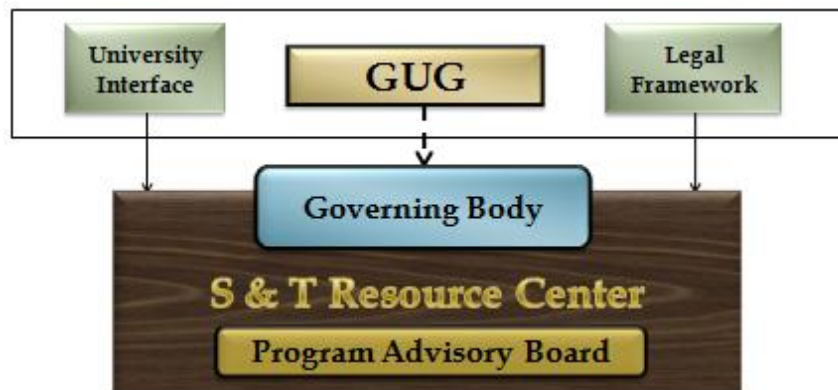
It is expected that GUG will evolve proper legal framework and an interface for STRC to be an autonomous body. This activity can perhaps be initiated immediately after the **intimation of sanction** of the project.
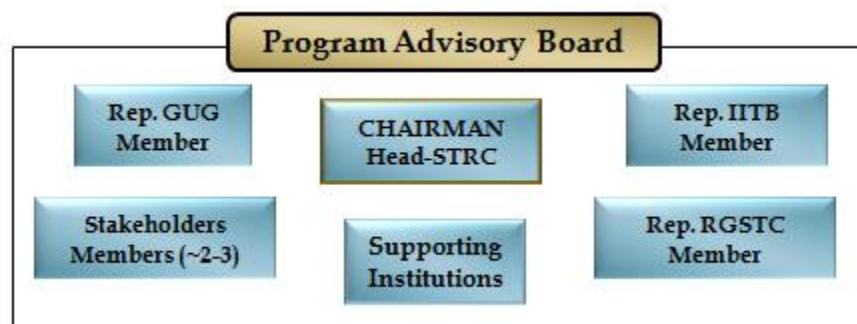
4.2 Governing Body:
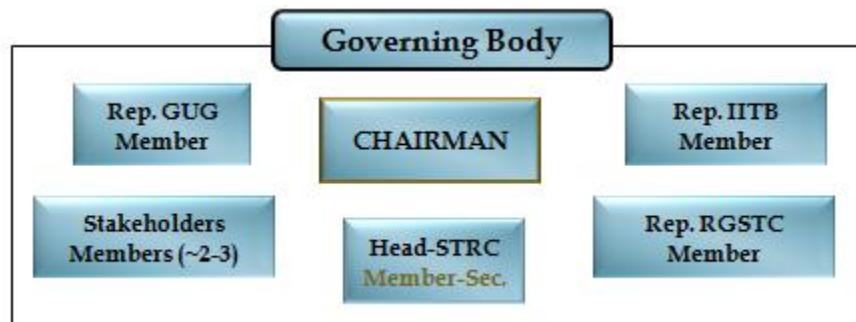
The Chairman of the governing body is expected to be an eminent person, certainly high on the scale of social awareness. **The selection of the chairman may be tasked to a committee headed by Chairman-RGSTC with Director-IITB and VC-GUG as members**. Head-STRC is a natural choice for Member-Secretary. GUG representative can perhaps be Director-BCUD. Representatives from various stakeholder groups need to be nominated that may include a representative with relevant industry background, after due diligence.

The governing body is to be on par with the top governing and management institutions within the GUG fold. As the governing body has a senior functionary of GUG as a member, the recommendations perhaps need to be vetted only by VC-GUG – as otherwise the concept of autonomy is likely to get diluted.

4.3 Program Advisory Board:

This mechanism will help keep STRC tuned to reality out there. This body meets three times a year on a set day of the month. This is essentially a body of stakeholders and experts in the field at large. Head-STRC in consultation with the Governing body will decide on its composition.

4.4 Organizational Structure

Head-STRC is to be designated as **"Chief Program Officer (CPO)"**. Five main programs are proposed, to be headed by **Program Coordinators**:

1. **Production & Value Creation**: Includes incubation space and marketing.
2. **Social Forestry**: Agriculture, Bio-resource, Environment, Sustainability.

3. **Research and Innovation**: Applicable R&D and innovation for S&T and human Resources.

4. **Academic Programs:** Diploma/certification courses, support to degree courses of GUG, much more.

5. **Community Support:** Continuing education, Outreach, various extension programs.

Each program is helped by **Resource Persons**, anywhere from, say, one (initially) to three and more at a later stage. There is provision for need-based adjunct appointments at all levels. **Details of job profile are spelt out in Section 8.**

4.5 Timeline for STRC

Phase 1 (Section 5) is the kernel of the program that gets STRC going – this two-year program builds up experience that helps shape future strategy for a full-fledged center in a systematic way in a five year time frame.

5. STRC Phase 1– Getting Started

Phase 1 schematic as shown here is the program STRC can get started with. This is a two-year initiation program. **Phase I objective** is to get the program going with a skeletal staff and infrastructure that should take firm roots within a span of a couple of years. Activities detailed below and elsewhere will evolve with experience and maturing of the core program. Five year profile for the center should emerge as planned outgrowth of the Phase I implementation.
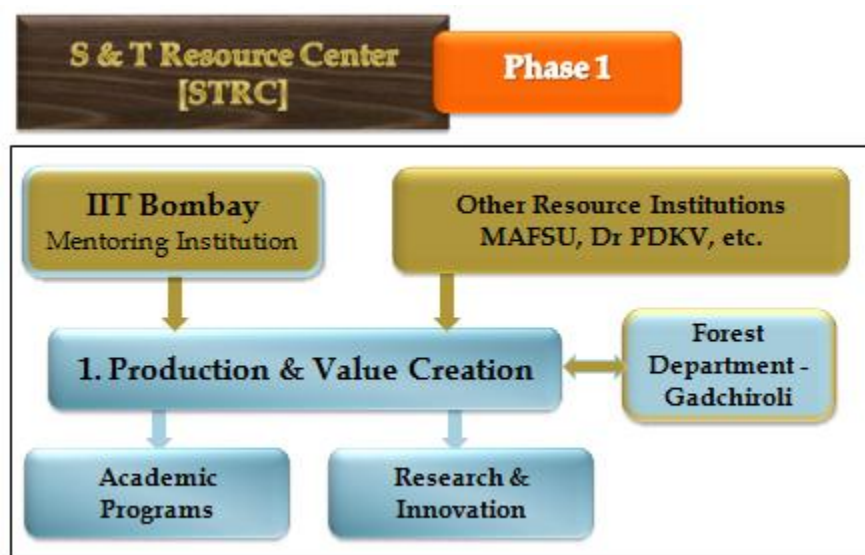
Sustained long term intervention is necessary for meaningful outcomes. Young individuals need to be motivated to actively respond in an independent manner without excessive dependence on the State. Local/Regional aspirations are to be bridged with the continuous transformations taking place around the world. Importantly, due respect has to be shown for local culture for effective acceptance of the development efforts.

5.1 Catalyzing Production & Value Creation:

This is and will remain the core program of STRC. Forest produce with value addition and value creation helped by technology intervention, research and innovation, and production and marketing tools as means for knowledge and skills development to usher in newer and better suited means for livelihood as well as livelihood upgradation is the main thrust of the program. This should also help create a professionally trained and motivated human resource to lead overall development. To help the process, maximum functional autonomy must be granted to STRC within the GUG framework, as stated earlier.

More details follow in the next chapter.

Initially the staff could comprise of 3 -4 dedicated and experienced coordinators, a few resource persons and one or two faculty (to be sourced laterally from GUG). In this context, a possible approach could be an opportunity on offer to hone sought after skills and an urge for social welfare. The Program Coordinator for **Catalyzing Production & Value Creation** *during Phase I* may be the CPO himself/herself: The position of the **CPO - Phase I** is naturally upgradable to that of the CPO for the fully configured STRC (may be designated as "Program Director") during Phase II. **As such this key resource will have a direct bearing on the success of the program. Search for the STRC human resources must begin in right earnest, at the earliest.**

In this initial phase, **contribution of IIT Bombay** in its mentoring role is expected to be substantial, as also of the participation of the **forest department, Gadchiroli**. Other institutions, particularly from the region, are also expected to participate.

5.1A. IIT Bombay as mentor for STRC-GUG

IIT Bombay will specifically help in establishing applicable R&D ambience inclusive of incubation and innovation and suitably tailored academic programs with vocational slant. **CTARA** and **Bambu Studio (IDC)** are the two participating entities of IITB having vast experience of the kind required for establishing a center with a mandate of STRC. Tailor-made one semester programs at IITB for Coordinators/Resource Persons from STRC for acquainting with the IIT way and requisite broad-based training to be able to carry on with the STRC programs are two key activities suggested by IITB.

IITB will also help the concept with planning and helping with implementation of relevant workshops facilities, artisan training modules and so on. A dialog may also be initiated with **SINE** at IITB for help in incubation activity at STRC.

IITB effort is expected to go a long way as also a catalytic resource, helping to synergize the linkage with GUG as well as various resource institutions that are to be roped in.

5.1B. Forest department in Gadchiroli district has undertaken several programs on generating and enhancing livelihood options of the tribals and disadvantaged groups dependent on the forests that form a majority in the region leading to contributing significantly to local area development in the process. The department has participation of several 'knowledge partners' from reputed institutions and active Joint Forest Management (JFM) committees. Their diversified contributions are primarily in the following areas:

> **Non Timber Forest Produce** – Activities include Bamboo craft with Bambu Studio (Prof. AG Rao)/IDC of IIT Bombay, Agarbatti making with Prof. Padole of VNIT-Nagpur as knowledge partner, fly ash brick making, Hirda, Behada and Charoli fruits products, Lac cultivation with Indian Lac Research Institute (ILRI) Ranchi as knowledge partner and fisheries with MAFSU (Nagpur) collaboration.

> **Bio diversity -** Gadchiroli forest is rich in flora and fauna. Forest department intends to develop People Bio diversity Registers (PBRs) with the help of Dr M. R. Almeida of Mumbai as knowledge partner.
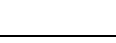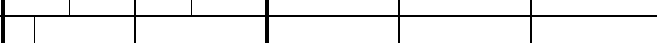
> **Watershed Development program** – Gadchiroli district has abundance of rivers and water bodies. Prof. Milind Sohoni, CTARA-IITB will be knowledge partner. **In fact, forest department in Gadchiroli has centered the developmental initiative around the watersheds that are in abundance in the district.**

Participation of the forest department, with vast resources and experience at their disposal, in the STRC program from the very initial stages of implementation is a key to fast-track the impact of relevant programs. It is expected to be a two-way street, for example forest department sharing the experience and participating in the program and STRC contributing to HR development of the forest personnel for the tasks.

5.2 Proposed Work Plan

Post-approval Pre-funding	Primary timeframe	Supplementary timeframe

Pre-funding		PHASE I		PHASE II		
		Year 1	Year 2	Year 3	Year 4	Year 5
3-mo	**Search for Head-STRC**					
3-mo	**Autonomy issues: GUG**					
	Program Coordinators /Resource persons					
	Semester duration training at CTARA/Bamboo Studio					
	Strategic Plan for Bamboo Craft set-up					
	Model Production Unit					
	Develop 1-year diploma course					
	Learning Lab and Creative Communication Center					
	Community Radio					
	Short term artisan training					
	Mentoring-CTARA/Bamboo Studio					
	Civil works					

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6. Programs in STRC

The programs in STRC are categorized in to five streams (Section 4.4). The Phase I has them in a developing form that should firm up in to divisions during Phase II.

6.1 Catalyzing Production & Value Creation

This is by far the most important division, comprising the core program of STRC. A detailed activity profile could look like this:
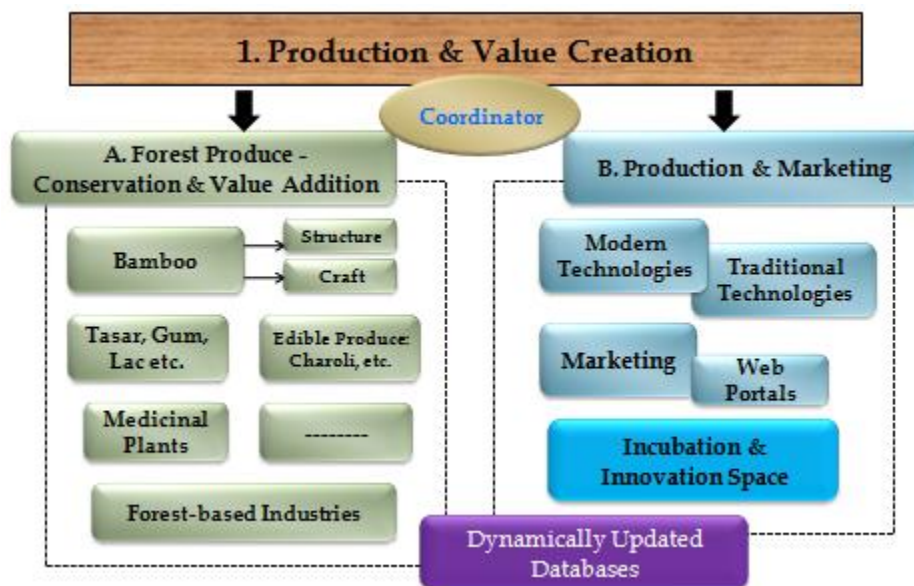
6.1. A Forest Produce – Conservation and Value Addition

Research on **non-timber forest product** (NTFP) have focused on three perspectives: NTFPs as a commodity with a focus on rural incomes and markets, as an expression of traditional knowledge as well as a livelihood option for rural household needs, and finally as a key component of sustainable forest management and conservation strategies. These perspectives

promote forest products as valuable commodities and important tools that can promote the conservation of forests. In some contexts, the gathering and use of NTFPs can be a mechanism for poverty alleviation and local development. [Wikipedia]

We briefly deal here with some of the **non-timber forest produce** available in abundance in the two districts of Gadchiroli and Chandrapur.

6.1. A1 Bamboo as material for structural use has great financial value, as also material for crafts. Solid expertise is available within the State and elsewhere and abroad. Bamboo as forest produce is possibly in need of scientific management.

Bambu Studio of IDC at IIT Bombay is to be consultant to set up facilities in this regard. Sampoorna Bamboo Kendra (SBK) near Melghat (Amravati District) in Vidarbha is another institution that in fact offers Diploma/Degree programs under Open University affiliation. In Vidarbha and rest of Maharashtra, the State has several other groups, KONBAC for example, contributing successfully in developing and implementing bamboo as resource.

Proposal from Bambu Studio of IDC at IIT Bombay

Strategic plan for bamboo craft and other forest produce to benefit the whole region in consultation with key stake holders like District planning authorities, Forest department and representatives of people need to be prepared. Experience has shown that there is difference in ethnicity and skills across the region. There is thus a need to conceptualize 3 - 4 production cum collection centers for bamboo and other forest produce based on local ambience. Such a strategic approach can lead to a design of **'brand identity'** for Gadchiroli products. Data collection and taking account of existing plans sourced by other stakeholders can synergize and consolidate the overall development. It is suggested to hire private consultants for this task under the guidance of IITB.

Model production unit in STRC: This will serve as a production cum training unit for bamboo as forest produce. Proposed activities include
➢ Treatment, processing, finishing and so on;
➢ Facilitate learning of interns who will be doing diploma in bamboo craft;
➢ A crafts museum and retail shop with traditional and state-of-the-art product collection/process demonstration to attract visitors – casual as well as professional;
➢ Play a role to assist the formation of cooperative structures/ women's groups, SHG's, micro-enterprises, etc.
➢ Develop a brand identity through package design.

6.1. A2 Tasar silkworm has significant production and further potential in the Gadchiroli forests (The specific species are in fact in endangered list). This is and can be developed in to significant economic resource through scientific rearing and processing for value addition. Apart from Dept of Sericulture in the state, SGB Nagpur University (Dept of zoology) as well as some NGOs have significant knowhow in this field.

6.1. A3 Medicinal Plants in the region are an important resource. From forest sourcing to medicinal products, significant value chain can be established and gainfully exploited. (RGSTC has funded a digitization of Aromatic and Medicinal plants Program in Maharashtra.)

6.1. A4 Other forest products that hold significant potential include Tendu leaves, Mahua, lac, Charoli, etc. There is work in progress, for example, by forest department, Gadchiroli and Dr PDKV collage at Gadchiroli.

6.1. A5 Forest Based Industries: Production and value creation entity needs to have synergy with existing and upcoming forest based industries within as well as outside the region. There is significant presence of bamboo based industries in Gadchiroli and Chandrapur districts, as well as lac processing units for example.

6.1. B Production and Marketing

Traditionally, low economic returns have been forcing the artisan community to explore alternative means of livelihood, as also leading to undesirable migrations to not necessarily greener pastures.

6.1. B1 Technology Initiatives

Conservation and value addition in the context of the forest produce needs technology intervention. Maintenance of traditional technology, upgradation as required and developing/acquiring appropriate technology as necessitated by requirements, all require a strong support base from STRC.

Proposed incubation space has synergic value as livelihood resource and much more.

6.1. B2 Production and Marketing

Production, branding, marketing and so on are all resource management tools. Linkages are to be forged with forest based industries. Implementing available e-marketing tools, such as the web portals developed by MGIRI – Wardha is a way to move forward. There are some other portals in the cyberspace that also need to be explored.

6.1. C Dynamically Updated Databases

There are several programs on the same theme running at any given time in the State, and in fact in the country and beyond managed by government bodies, NGOs and industry CSR groups for example. Thus there is significant overlap of activities of similar nature on the one hand and possibly lack of information on sector evolution elsewhere. **There is a practical need for evolving a database that is continually updated.** Managing this activity at STRC is in the interest of the center, region and indeed the nation; additionally, the database itself serves as a significant resource.

6.2 Social Forestry
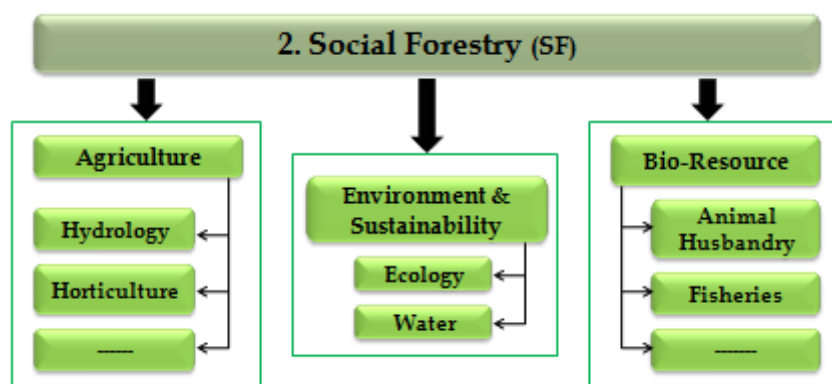
This field covers such diverse areas as Horticulture, Bio-resource (Animal Husbandry, Fisheries), Environment and Sustainability. Importance cannot be downplayed in today's ecological pressure-cooker ambience and vulnerability on the one hand, and issues relating to environmental sustainability and tribal sensibilities at the other end. On its

own, the field sustains and has tremendous potential as a dignified livelihood resource. MAFSU and Dr PDKV are the two institutions that can be roped in to play a leading role, as also some NGOs in this context. This activity is expected to fully establish during Phase II.

6.3 Applicable Research and Innovation

This activity is intrinsic to sustaining STRC mandate. This is at the same time a resource in itself - new discoveries, innovations, products, inculcating research methodology at large, and so on. In the present context, R&D encompasses applicable research in forest management, value chain, production sphere, study of human resource and so on. Lateral placement from GUG establi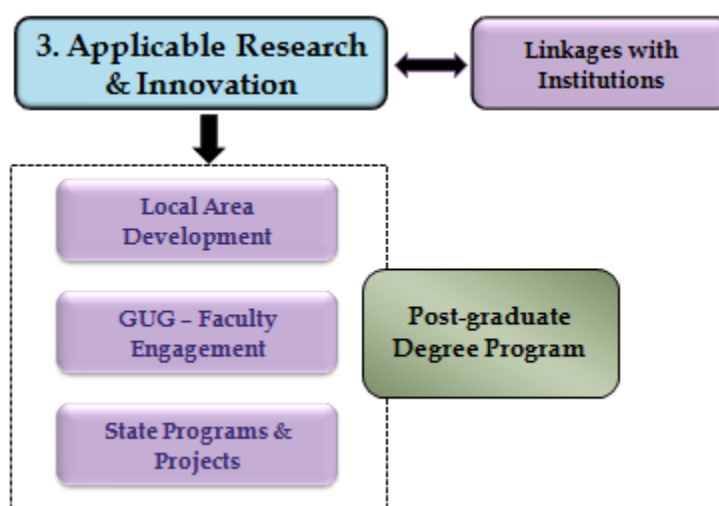shments and on-loan faculty as well as involving PG/research students from supporting institutions is strongly recommended.

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3. Applicable Research     ◄──►    Linkages with
& Innovation                        Institutions

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        ▼

  ┌─────────────────────────────────────────┐
  │  Local Area                              │
  │  Development                             │
  │                                          │
  │  GUG – Faculty        Post-graduate      │
  │  Engagement           Degree Program     │
  │                                          │
  │  State Programs &                        │
  │  Projects                                │
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Research in Development, Structure of Governance and State/National flagship programs; various datasets associated with these and familiarity with key processes; knowledge and practice of Government initiatives such as NREGA, drinking water and so on – these are some of the leads for this program.

Incubation facility that leads to innovation needs to be established at STRC. Help could be sought from SINE at IITB as well as CIVN at VNIT-Nagpur, for example.

6.4 Academic Programs

STRC remains symbiotically linked to GUG, and academic programs follow naturally. One-year diploma courses, as also shorter term certification/training courses will be offered. The courses may admit students directly. Students from other streams within GUG should also be eligible. There should be a scope for developing earn-as-you-learn ambience in STRC.

The driving principle in this context is that the creation of professionally trained & motivated human resource will begin to influence the overall character & quality of development of the region that has forest as livelihood resource and where population flavor is tribal.
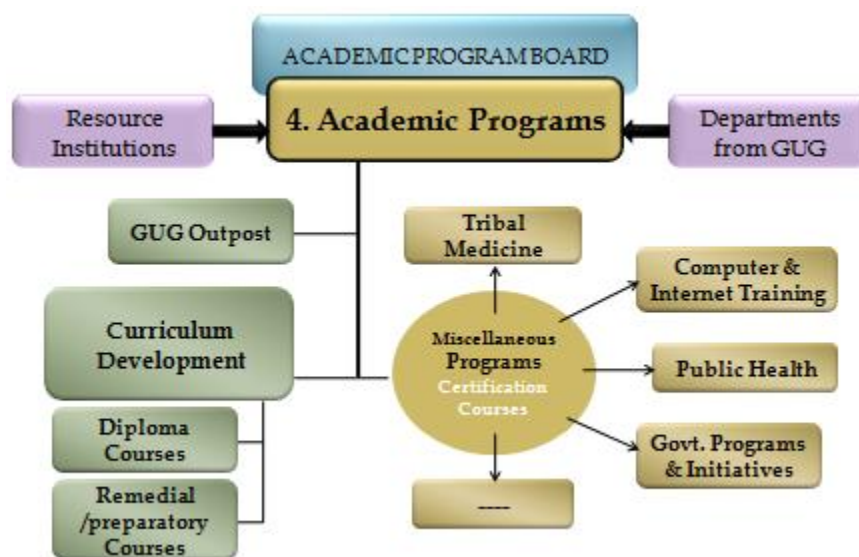
6. 4. 1 Academic Program Board:

Academic Program Board will supervise academics cutting across various divisions. CPO-STRC (Chairman) and Coordinator-Academics (Member-Secretary) along with a GUG functionary, IITB faculty member, professionals from resource institutions and 1-2 stakeholders could be members. This board will be on par with similar entities within GUG.
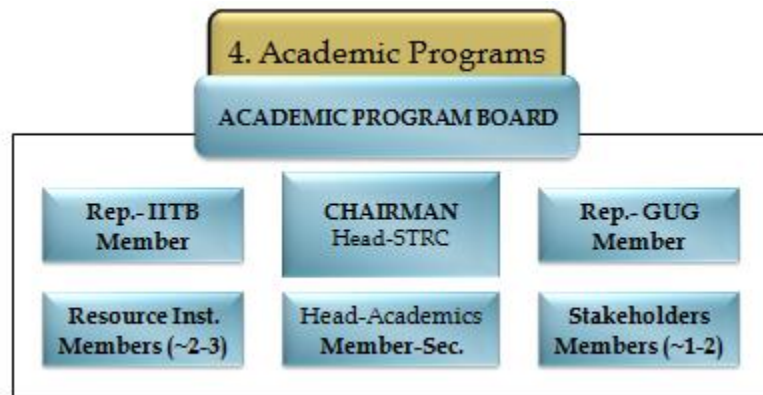
6.4.2 Proposals from IIT Bombay

As already stated, IITB is the lead support institution for developing STRC.

CTARA:

CTARA (in association with Bambu Studio/IDC) will assist in building capacity of Program Coordinators. This will be in the form of a semester-long mentorship program at IIT Bombay. Focus on the following topics is proposed: Basics of forest research, Research in Development, formulating projects and carrying them out, the role and conduct of field work, Participatory Methodology, Creative problem solving, Design, Visual communication and so on. Most topics above will be learnt by the Program Coordinators in an assignment/ studio task/ project/research paper mode.

Bambu Studio/IDC:

Diploma in bamboo craft –duration 1 year

This unique programme would cover: Bamboo craft skills, products, structural use of bamboo and related disciplines; Modules for Creative Problem Solving; Communication skills, basics of internet use, etc.

For school dropouts: A remedial course of 4 to 6 months to complete 12th standard exam is suggested. During that period students will also work in the **model production unit** to get financial support.

Curriculum development based on local culture for designing education will be developed. Course materials for the trainers in video and workbook formats will be developed. Resource persons from SBK and others will be invited to participate.

Knowledge base developed over several years at Bambu studio on tools, moulds etc. will be put into academic format. The resource material will be useful throughout the country as well.

Training four resource persons (craft trainers) in bamboo craft:
One semester exclusive training programme for craft trainers from the area will be conducted at bamboo studio. They will be trained to use the educational resource material. They will become crafts-studio faculty for one-year diploma course. They will be also engaged in continuous craft skill up-gradation training of craft persons in the area.

Program Coordinators who will come for training and research exposure in CTARA will also go through one month training at Bambu Studio to enable them to conduct one year diploma programme.

6.4.3 STRC Initiatives:

A Post-Graduate Program at STRC can be conceived to create managers and entrepreneurs (in local resources) for establishing competitive enterprises. Such an initiative will set an example for professionalizing the sectors under focus and thus help in bringing the sought after development. Possible target courses could include, for example, Artisan Capacity Development, Craft Innovation and Development and Marketing Management. Course content could be designed keeping the broad objectives of STRC in focus. Research degrees are also on the agenda.

Let it be stated here that degree programs are GUG prerogative; STRC will synergize with GUG for the initiatives stated, as also be a vehicle to allow a ride to help reach the destination. This is termed "GUG Outpost" in the schematic above. Joint faculty positions may be put in place in the STRC context.

Additionally, and importantly, remedial course work for students who could not clear the school board exams is envisaged to make those students eligible for regular course work. This latter provision could be part of Community Resource Program as well. As stated elsewhere, Bambu Studio has concrete plans to help in this task.

Miscellaneous programs on Tribal Medicine, Public Health, Community Ophthalmology, Computer and Internet, and so on, can be well supported for certification courses with proper planning. Well established NGOs for example, may be expected to join in the effort.

Some of the employment avenues that could open up are, Design coordinators, Craft Managers, Entrepreneurs, future Trainers, Craft/Design Teachers, Working in Govt. Organizations, Serving/Starting NGOs, and so on.

Some (recurring) revenue generation could come from admission & tuition fees from students, as well as from short-term programs based on specific modules developed in situ.

6.5 Community Support

CILLAGE - An eco-system that incorporates the best of a city and a village - a development model for rural India [Dr Anil Kakodkar: DNA of Rural Development]. This is a concept that marries the S&T driven socio-economic space with traditional rural ecosystem – incorporating the proven best practices and local sensibilities.

STRC is certainly a platform to bring about a fair and dignified integration that the concept CILLAGE strives for. The Community Support Program can orient itself to contribute in this direction.
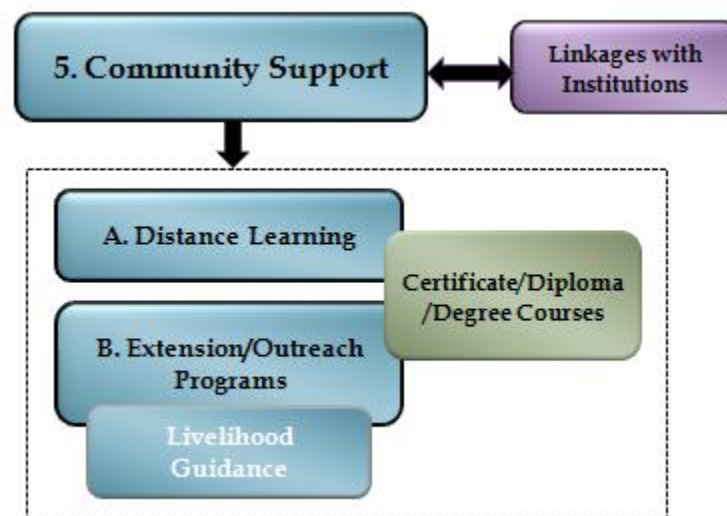
All extension and outreach programs are to be part of this division. We also address other resource like for example, Distance Learning, Continuing Education, Livelihood Guidance, and so on. Digital Media Lab and high-speed WI-FI connectivity for STRC is proposed. It should be

possible to specially design relevant certification courses as well. Resource institutions have a role to play in this context.

Livelihood Guidance is more than a placement center – It also caters to self-help and community effort in value generation in the local ambience.
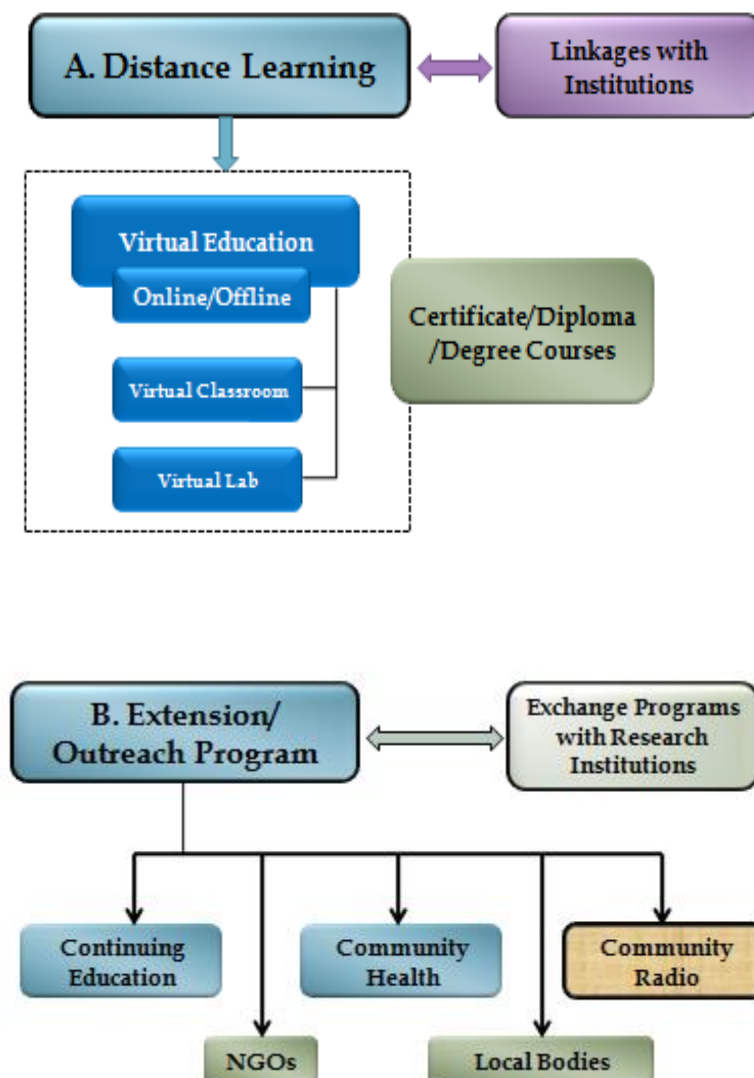
6.5.1 Other Programs/Packages: These include, for example, year-round short-term training programs for artisans, SHGs and so on that are to be covered in respective Divisions. It will be in order for the Center to scout for potential trainees from the local tribal and backward communities, as well as others who could be a useful resource. Essentially, programming

flexibility needs to be mandated in STRC. **For all the STRC divisions listed above, suitable linkages with resource institutions are to be put in place.**

6.5.1a Community Radio is proposed to help the cause of Gondi language of the local tribal population. Gondi language groups extend beyond the two districts of Chandrapur and Gadchiroli to Bhandara, Gondia and parts of Andhra Pradesh. This proposal needs expert inputs. [GoM has expressed interest in radio transmission in Gondi language– Lokmat dated July 05, 2013]. Details will follow in a separate annexure.

6.5.1b Learning Lab / Creative Communication Centre (LL/CCC)
     Proposed by Bambu Studio/IDC.

The facility would play three lead roles.

a. To Energise School Education

Learning lab aims at improving the school education in the area to make it meaningful and modern. Improving learning of Science, Mathematics and Design in Ashram Schools through experiental learning will reduce the school dropout rate in the long run. It would introduce craft as well as computer education in the schools. **A model mini bamboo studio for Ashram schools will be offered through the Learning Lab.**
Experimental workshops like "Bammetry" (Symmetry with Bambbo), "Baans se Ganith" held at SAMPARC Tribal school (Bambarde) and research on TLPs (Teaching Learning Platform) have generated a frame work for such work. LL can become a vehicle to gain from the experience of NGOs like BAIF in teaching of Math to tribal youth,etc. **These activities can become a base to improve D.Ed and B.Ed programmes of GUG.**

b. Lab on Wheels

Designing and creating exhibition panels on mobile platforms for training the villagers on forest produce/wealth (bamboo plantation, Lac and honey cultivation, water conservation, veterinary practices, health training, appropriate technologies etc,.) will be undertaken in the Learning Lab.
It can become outreach wing for science and technology dissemination of demonstration projects of AKRUTI/TTCD/BARC, MAFSU, Dr PDKV and so on. LL/CCC will augment and assist the field training programmes of the Forest department and other NGOs in the area.

BIT (Bridge Language Inventory) for Gondi language developed in projects like Janashala (UN assisted) can be used to reach out to tribals in the interiors.

c. Technology Assisted Learning (TAL)

The lab will be equipped with computers and audio facilities for TAL for Maths, Language and Internet use. Local talents can be engaged in translating the knowledge base into 'Gondi' language for radio transmission. Cultural modes like folk songs, dances and narratives can be coupled with Science and Technology Melas in addition to educational entertainment through community radio (Section 6.5.1a above).

Learning Lab / Creative Communication Centre (LL/CCC) is a facility around which some of the major streams under "Community Support" could be organized for effective implementation.

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7. Job Profiles – Technical

At the outset let it be stated that positions in STRC while they may have equivalence for, say, protocol vis-a-vis GUG, the proposed mandate necessitates alternate job profiles, designations and organization structure.
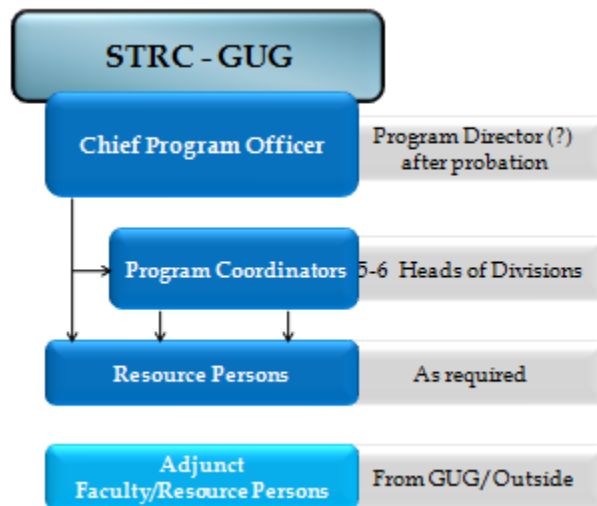
7.1 Head-STRC [CPO]:

To fruitfully fulfill the mandate of STRC, the position of Chief Program Officer (CPO) calls for nothing short of a head hunt at national level. Maximum possible functional autonomy for the Center is perhaps the carrot in the present context. Constitution of a search & selection committee comprising of 3-4 senior experts from diverse yet relevant walks of life is recommended.

> **CPO-STRC** will be responsible for managing STRC and executing its mandate; should be able to appreciate the stakes involved in **sustainable value creation**. Well experienced person is to be sought from Maharashtra or elsewhere. Experience may outweigh basic educational background which is *suggested* as at least a postgraduate degree in an engineering discipline. Expect at least 10-year fieldwork-relatable

experience, with expertise in rural management/development sectors; presently in a senior position in private or Government set-up, or with any top ranking NGO with leadership / motivational qualities. Should be able to adjust to backward/tribal environment; desirable to have experience in dealing with Government apparatus as well as University/educational ambience.

As already stated in **Section 5.1**, the Program Coordinator for **Catalyzing Production & Value Creation** *during Phase I* may be the CPO himself/herself.

Phase I tenure may serve as probation for the CPO.

Associate professor level or better pay scale is recommended.

7.2 Program Coordinators:

These posts are to be on par with Assistant Professor grade.

7.2A Catalyzing Production and Value Creation: Scaled down version of **3.2.1** above: This position will be responsible in developing skill sets, knowledge and practices for creating value in forest produce and enabling livelihoods. He/she will (i) interact with Forest Department and other entities for the existing/running programs and extend these programs to (ii) develop new areas for value creation (iii) employ trainers and liaison with other groups in the country in the area of NTFP (iv) develop marketing strategies and establish markets for NTFP (v) organize regular courses for students/artisans of the area where applicable (see later).

There are two sub-programs proposed in **Production and Value Creation** division as [**A**] **Forest Produce - Conservation & Value Addition and [B] Technology & Marketing.** Possibly two positions may be thought of**.**

7.2B Social Forestry: Advanced (preferably) engineering degree in the field of Agriculture/Bio-resource/Ecology or a related field, with relevant broad-based experience is expected. This field, in the present context, covers areas in agriculture domain, technologies for bio resource sustainability/production and environment.

7.2C Applicable Research: As a bridge between resource technology and Academics, it is to serve as a vehicle for continuing advancement of the region. A doctoral degree with relevant experience may be a prerequisite.

This position will develop and coordinate applicable research for STRC. The problems for research will be specific to the region, its people and their development. He/she will liaison with other area coordinators and faculty members and develop specific R&D leads. He/she may assist GUG faculty members in writing proposals for various funding agencies, conduct of research and its deployment. He/she may also cater to the knowledge needs of various state programs and projects.

7.2D Academic Programs: From curriculum development and research capability to lateral associations with educational institutions, this post is to be on par with a 'Faculty Dean" in a University. A doctoral degree should be a prerequisite with relevant experience. This division is supervised by an **"Academic Program Board"**.

This position of **Coordinator** may help develop courses for the Bachelor and Masters level students of GUG and elsewhere which are specific to the region and provide important knowledge inputs for STRC. He/she will develop linkages with various state agencies and develop educational modules suitable for these programs. He/she will coordinate and guide project-work for students and develop a faculty base engaged in this work.

STRC is facilitator for GUG academic activities as also a work platform after due clearance on case basis. Inviting faculty to serve appropriate purpose is certainly called for. IITB shall be a mentor for this activity.

7.2E Community Support: For all the extension program functions, distance education, livelihood guidance, and so on, this is an umbrella division that is an interface with the world outside. The Coordinator may be qualified at post-graduate level with suitable experience. IITB as mentoring resource should be specifically significant in this context.

7.3 Resource Persons for the Divisions:

Each of the divisions above will have trained resource persons to assist with the tasks. By resource person we imply a starting position as a Research/Scientific/Technical assistant with requisite background, a possibility of training on offer and an innovative mind. The label "resource person" is preferred as it also entails significant field-social interactions. And literally as all the job levels involve some "mentoring", this position is, say, ubiquitous as it were.

Preferably with an engineering degree/diploma and relevant experience to fulfill a given category of tasks and aptitude for field work, this employment may be on contract basis. Well reputed NGOs may possibly offer a supply base. Pay scale may be that of a research associate.

7.4 Adjunct Faculty/Resource Persons

The position of Resource Person on the one hand has upward mobility in STRC (as above) while on the other hand, a task specific invitation is contemplated for a fixed tenure wherein usual norms may be given a go by. In fact, a situation akin to PGs helping run medical institutions, or helping out university research in foremost institutions may be a good parallel. A two-way benefit is there to see for all the stakeholders.

In such a case, this position may be prefixed "adjunct" to the position held elsewhere.

This category of **visiting staff at all levels** should be a lifeline for STRC, and is to be managed prudently. The CPO and perhaps the mentors are expected to plan and propose invites to further the goals of STRC in a holistic fashion. Suitable honorarium/Consultancy provisions should be properly budgeted.

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8. Resource Institutions

These could be divided in to two broad categories: Academic and non-academic resource. Specific proposals from resource institutions and others may be sought to augment STRC effort. **It is suggested that a contingency fund (recurring) may be set aside for enabling the joint ventures and consultancy.**

8.1 Academic Institutions
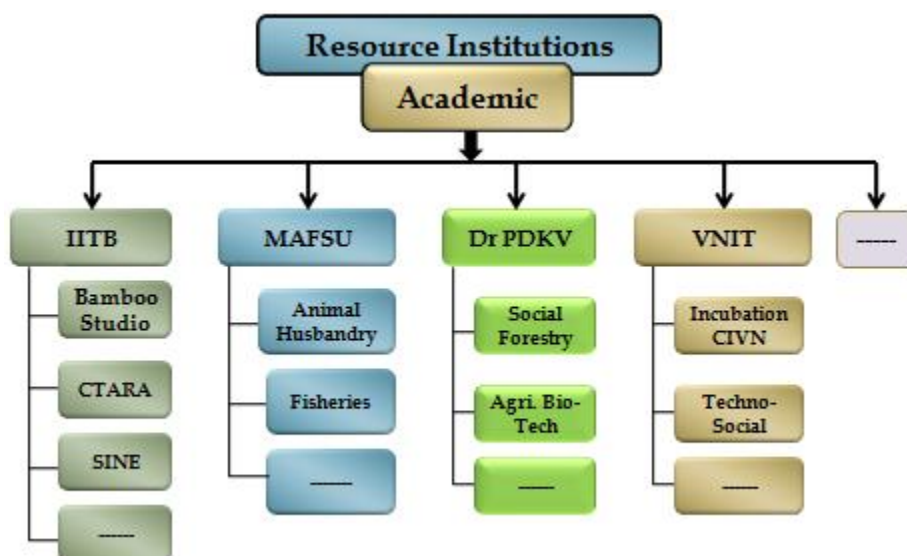
IIT Bombay is designated as a mentoring institute for the STRC program. It is expected that GUG enters in to a formal agreement with IIT Bombay to this effect. **Bambu Studio of IDC and CTARA** are identified partners. **SINE** is another venture that can be approached for incubation expertise.

> **Bambu Studio:** Bamboo Studio intends to nurture the bamboo craft to create new products made of craft with industrial discipline and appropriate technologies. Under a UNDP sponsored project through Ministry of Textiles, Government of India, a Tool kit with 33 items and 4 Hand operated Machines was designed and developed by a team of designers and engineers lead by Prof. A.G. Rao. Tool Kits and Small

Machines were brought into production with several field trials and feedback. The tools in the tool kit cover various operations in bamboo craft from cutting of bamboo to final finishing. New well studied products are continuously developed in the Bambu Studio through M.Des projects and a unique elective 'Craft,Creativty and Post Modernism' attracts students from other departments and other countries in addition to IDC.

CTARA: The **Centre for Technology Alternatives for Rural Areas** was established in IIT Bombay in July 1985 for the purpose of developing technologies in relation to the specific needs of a small region. The objectives imply the following perspectives:

- To develop appropriate technology and concept based on application of basic and engineering sciences.
- To work on the relevant problems to bridge the gap between the needs and resources of a specific region.
- To disseminate information on the developed technology and carry out demonstration to create an increased awareness amongst the users.
- To analyze the impact of technology and development in the context of small region.

From July 2007 the CTARA has started a 2 years M. Tech. Programme in Technology & Development."

SINE: **Society for Innovation and Entrepreneurship**, hosted by Indian Institute of Technology Bombay is an umbrella for promotion of entrepreneurship at IIT Bombay. SINE administers a business incubator which provides support for technology based entrepreneurship.

MAFSU – Caters to the fields of animal, dairy and fishery sciences. MAFSU strives for creating rural employment, economic prosperity and wellbeing of the resource-poor farming community in the state through viable and vibrant research and impact making extension education services; contributes to public health research with an ultimate aim to enrich human nutrition and welfare. Provides an environment for conducting need based high-quality research, applying the best outreaching strategies and practices.

Dr PDKV, Akola: Social forestry programs in all components- horticulture, ecology, water, etc. as also forest resource activities could be helped by this leading agriculture university having significant presence in Gadchiroli District.

VNIT-Nagpur: VNIT has CIVN, a nascent incubation center that has been funded by RGSTC. There is significant techno-social contribution to the region (in bamboo technology, foundry, smithy, etc.) from this institution over decades.

8.2 Other Resource Institutions

Entrees in the Schematic are illustrative.
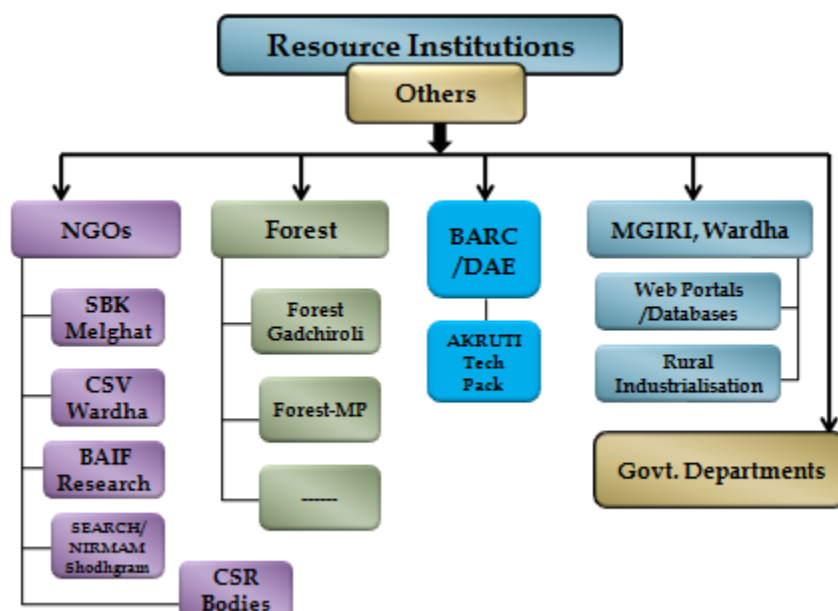
Forest Department, Gadchiroli has a very significant role to play in program STRC (**Section 5.1B**). They are expected to contribute their experience towards forest produce and value addition, training programs, district administration interface, and so on. Experience of Forest Dept., MP, in value addition, branding and marketing can be an additional resource.

Technology Transfer & Collaboration Division /BARC: Under DAE-Societal Initiated 'AKRUTI' programme, the technology deployment exclusively in rural sector is offered on chargeable basis in the form of technology package called AKRUTI Tech Pack consisting of technologies and technical consultancy service at an affordable price. It is possible to set up AKRUTI Tech Pack arena near STRC-GUG with linkages developed over a period.

MGIRI, Wardha (MSME institution) has web portals development as also other products in the category of small and micro scale industrial development.

SEARCH/NIRMAN (Shodhgram, Gadchiroli Dist.): This internationally recognized NGO has done remarkable social work in the area of public health, livelihood and education for the tribal areas. NIRMAN specializes in awakening and directing social instincts of the educated youth, engineers and doctors included, across Maharashtra for community welfare.

BAIF-Research needs no introduction. The NGO is also active in the region.

There are a number of other **reputed NGOs** - SBK (Melghat; detailed elsewhere), CSV (Wardha), & so on- some or all could be appropriately roped in. **It may be possible to approach CSR functionaries from industries for helping with the programs at STRC.**

Role of **Government Departments** (State as well as Central) in contributing to the Programs at STRC cannot be underestimated. Synergy must be established between various development schemes and STRC-GUG. It is also possible to develop training programs for Government personnel, use expertise where available and creatively employ available funds for local area development vis-à-vis STRC mandate.

9. Project Support

9. 1 Manpower Requirement

Phase I of the program, as discussed in **Section 5**, can begin with perhaps three-four Coordinators and equal number of Resource Persons. A skeletal Office staff, say, two assistants and one accountant may suffice for Phase I. Further details are to be found in Section on Budget (10).
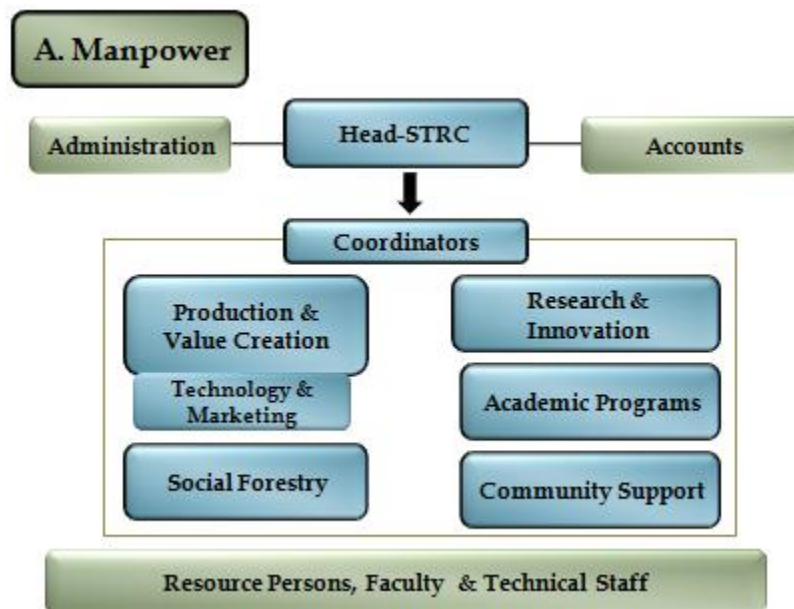
9.2 Infrastructure

GUG will provide state of the art office for the Head – STRC in the Administration Block of GUG at Gadchiroli till permanent arrangements are in place. Possibly makeshift accommodation will need to be provided as the program gets initiated; by end of Phase I, STRC should be in a position to move in to permanent quarters.

B. Infrastructure
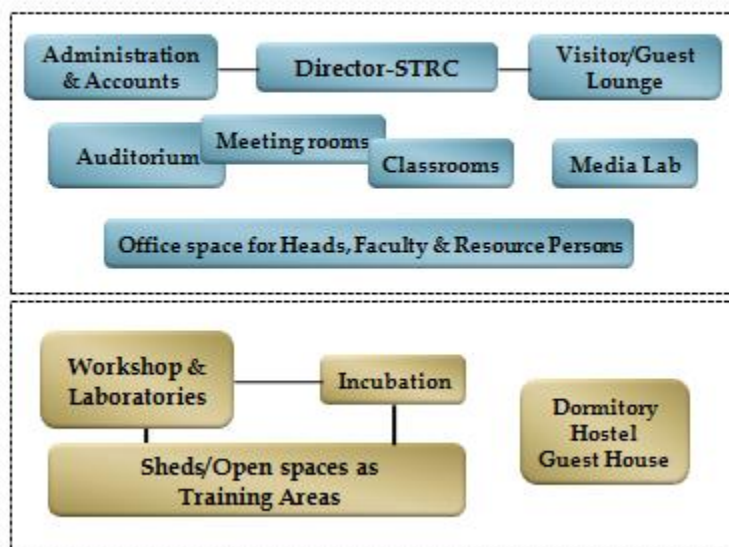
I.   **Administration block** for housing the offices of Head and Coordinators, administration, accounts and store, classrooms, auditorium, meeting/seminar rooms, visitors area, media lab, broadband/wi-fi connectivity and internet with a few nodes to begin with. There should also be provision for offices for other faculty and resource persons.

II. **Workshop(s), Lab space & Open shades** to house training and production facilities. **Space for Incubation** center may form part of this facility.

III. **Dormitory** for short and medium term trainees; **Hostel** for students; **Guest House** for visitors.

Innovative low-cost designs employing alternate technology and materials – appropriate for the concept STRC and the geographical and physical location – are strongly recommended. Barring perhaps the main Office Block, no two-story structure may be constructed. Experiments in construction, materials, energy sources, and so on could be in-sourced from the local ambience with proven guidance sought nationally.

Land to house STRC will be provided by GUG at a suitable location in Gadchiroli town or on the outskirts thereof. **The requirement for full-fledged STRC is estimated at four acres.**

9. 3 Funding the Program – STRC
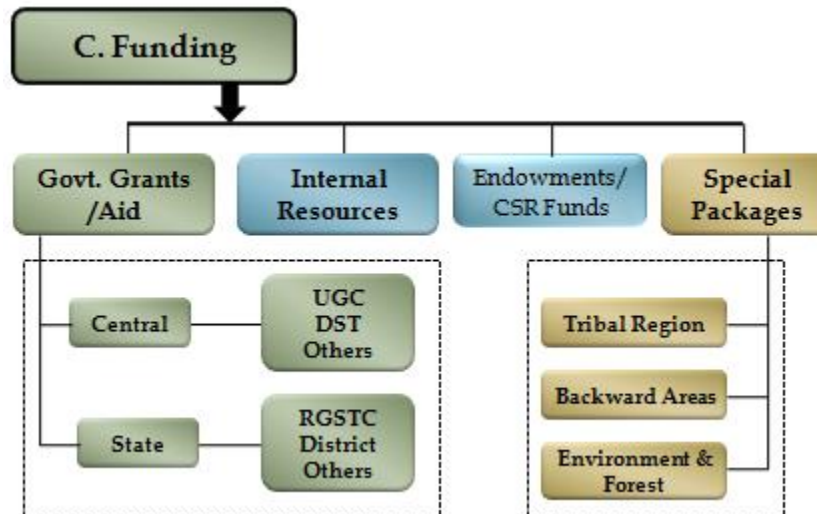
Seed funding and funds for the program STRC will have to be sourced pragmatically. For several years, it may not be possible to fund the program from internal resources at any significant level. Here follows a schematic that outlines the possibilities.

Available/accessible funding resources are being compiled for DPR-GUG.

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10. Budget

10.1 Itemized Annual Budget – Summary [Rs. in Lakhs]

	Non-recurring Budget	Phase I		Phase II			Total
		Year 1	Year 2	Year 3	Year 4	Year 5	
1	**Training at IITB** for STRC Staff (CTARA & Bamboo Studio)	34.80	---	34.80	---	---	**69.60**
2	Develop curriculum, Audio-visual material for **1-year diploma course**	8.00	2.00	2.00			**12.00**
3	**Strategic planning for workshops + execution of Model Production Unit** at STRC (Bamboo Studio)	25.00	60.00	20.00	---	---	**105.00**
4	**Learning Lab and CCC**	20.00	20.00				**40.00**
4	**Community Radio**	40.00	---	---	---	---	**40.00**
5	**Infrastructure Development** for STRC	138.00	93.50	110.00	45.00	---	**386.50**
6	**Contingencies - @~10%**	27.00	18.00	17.00	5.00	5.00	**72.00**
7	**Total: Non-recurring**	**292.80**	**193.50**	**183.80**	**50.00**	**5.00**	
		486.30		**238.80**			**725.10**

	Recurring Budget	Phase I		Phase II			Total
		Year 1	Year 2	Year 3	Year 4	Year 5	
1	Short term **training for artisans @Rs. 50k per batch**	2.00	3.00	3.00	3.00	3.00	**14.00**
2	Forest Dept – Gadchiroli Dist.	10.00	10.00	10.00	10.00	10.00	**50.00**
3	**Joint proposals with Resource Institutions** (all)	30.00	30.00	40.00	40.00	40.00	**180.00**
4	**Mentoring/monitoring** by CTARA/Bamboo studio, IITB	3.60	3.60	3.60	3.60	3.60	**18.00**
5	Consultancy, general	10.00	10.00	10.00	10.00	10.00	**50.00**
6	**Library and IT** – Hardware & Software, Internet, etc.	30.00	30.00	30.00	30.00	30.00	**150.00**
7	**Community Radio**	10.00	10.00	10.00	10.00	10.00	**50.00**
8	**Travel**, incl. internal tours, etc.	6.00	6.00	8.00	8.00	8.00	**36.00**
9	**Salaries budget**	45.92	45.92	58.08	58.08	58.08	**266.08**
10	**Maintenance**: electrical, civil, mech., incl. bills	5.00	5.00	7.00	7.00	7.00	**31.00**
11	Miscellaneous and **contingencies**	14.00	14.00	15.00	15.00	15.00	**73.00**
12	**Total: Recurring**	**166.52**	**167.52**	**194.68**	**194.68**	**194.68**	
		334.04		**584.04**			**918.08**

10.2 Budget in Details

10.2A Non-Recurring (in Rs. Lakhs)

ITEM		BUDGET					TOTAL
		Phase I		Phase II			
A1: CTARA, IITB Years →		**1st**	**2nd**	**3rd**	**4th**	**5th**	
	One semester training* at IITB: up to 4 coordinators, @ ~4.20 lakh/per person - *with Bambu Studio	**16.80**	---	**16.80**	---	---	**33.60**

A2 **B A M B U** **S T U D I O**	ITEM	1st	2nd	3rd	4th	5th	TOTAL
	Strategic Plan for Bambu Craft set-up at STRC	5.00	---	---	---	---	**5.00**
	Planning and execution of **Model Production Unit** at STRC	20.00	60.00	20.00	---	---	**100.00**
	Develop course curriculum and Audio-visual material for **1-year diploma course**	8.00	4.00	---	---	---	**12.00**
	One semester training at Bambu Studio/ IITB: up to 6 craft trainers and Resource Persons	18.00	---	18.00	---	---	**36.00**
	Learning Lab & CCC	20.00	20.00				**40.00**
A2. Budget for Bambu Studio /IDC /IITB: Total		**71.00**	**84.00**	**38.00**	---	---	**193.00**
		155.00		**38.00**			

A3 **C I V I L & M E C H W O R K S**	ITEM	1st	2nd	3rd	4th	5th	TOTAL
	Administration block; including typical institutional infra (Sec. 8.B)	50.00	25.00	25.00	---	---	**100.00**
		75.00		**25.00**			
	Workshop, shades, outdoor facilities, etc.	35.00	35.00	25.00	25.00	---	**120.00**
		70.00		**50.00**			
	Hostel and **D**ormitory	15.00 (D)	25.00 (H)	25.00 Extns	15.00 Extns	---	
	Guest House	25.00	---	25.00	---	---	**130.00**
		65.00		**65.00**			
	Contingency @ ~10%	13.00	8.50	10.00	5.00	---	**36.50**
		21.50		**15.00**			
A3: Budget for civil works: Totals		**138.00**	**93.50**	**110.00**	**45.00**	----	**386.50**
		231.50		**155.00**			

	A4: Community Radio	40.00	---	---	---	---	40.00
	A5: Contingencies, general	27.00	18.00	17.00	5.00	5.00	72.00

Total Non-recurring Budget: A1thru A5	292.80	195.50	181.80	50.00	5.00	725.10
	488.30			236.80		

10.2B. Recurring Budget

	B1. Joint Proposals and Consultancy	BUDGET					TOTAL
		Phase I		Phase II			
	Years →	1st	2nd	3rd	4th	5th	
1	Short term **training for ~four artisans @Rs. 50k per batch**	2.00	3.00	3.00	3.00	3.00	**14.00**
2	Forest Dept – Gadchiroli Dist.	10.00	10.00	10.00	10.00	10.00	**50.00**
3	Fund for joint proposals from Resource Institutions_ Academic	20.00	20.00	25.00	25.00	25.00	**115.00**
4	Fund for proposals from Resource Institutions_ Non-academic	10.00	10.00	15.00	15.00	15.00	**65.00**
5	Mentoring/monitoring by CTARA/IITB	1.80	1.80	1.80	1.80	1.80	9.00
6	Mentoring/monitoring by Bamboo Studio/IITB	1.80	1.80	1.80	1.80	1.80	9.00
7	Consultancy, general	10.00	10.00	10.00	10.00	10.00	50.00
B1. Budget for Jt. Proposals and Consultancy		55.60	56.60	66.60	66.60	66.60	
		112.20		199.80			**312.00**

B2	**Library and IT** – Hardware & Software, Internet, etc.	30.00	30.00	30.00	30.00	30.00	
		60.00		90.00			150.00
B3	**Travel**, incl. internal tours,	6.00	6.00	8.00	8.00	8.00	

	etc.	**12.00**		**24.00**			**36.00**
B4	**Community Radio**	10.00	10.00	10.00	10.00	10.00	**50.00**

B5. Salaries, etc

B5	**Salarie**s, Tech staff: Head (80k pm), 3-4 coordinators (@50k), 3-4 resource persons (25k)	36.60 (3+3)	36.60 (3+3)	45.60 (4+4)	45.60 (4+4)	45.60 (4+4)	**210.00**
		73.20		136.80			
	Salaries: Office staff, 2 in Phase-I, +1 for phase II (@18k pm; averaged)	4.32 (2)	4.32 (2)	6.48 (3)	6.48 (3)	6.48 (3)	**28.08**
		8.64		19.44			
	Contingencies: Visiting experts, temporary appointments, etc.	5.00	5.00	6.00	6.00	6.00	**28.00**
		10.00		18.00			
B5. Salaries budget: STRC		**45.92**	**45.92**	**58.08**	**58.08**	**58.08**	
		91.84		**174.24**			**266.08**

B6	Maintenance: electrical, civil, mech., incl. bills	**5.00**	**5.00**	**7.00**	**7.00**	**7.00**	
		10.00		**21.00**			**31.00**
B7	Miscellaneous and contingencies	**14.00**	**14.00**	**15.00**	**15.00**	**15.00**	**73.00**
		28.00		**45.00**			

Total Recurring Budget: B1 thru' B7	**166.52**	**167.52**	**194.68**	**194.68**	**194.68**	
	334.04		**584.04**			**918.08**

10.3 Budget Summary

STRC at GUG (Rs - lakhs)		Non Recurring	Recurring	Total
Phase I	**Two Years**	488.30	334.04	**822.34**
Phase II	**Three Years**	236.80	584.04	**820.84**
Total Budget (5-Years)		**725.10**	**918.08**	**1643.18**

Annexure:

A Brief Report on Two day workshop on "Shaping of Science and Technology Resource Center (STRC) at Gondwana University, Gadchiroli: First Steps to CILLAGE in Gondwana region"

Organized by Gondwana University in association with Rajiv Gandhi Science and Technology Commission [GoM], IIT Bombay and Forest Department – Gadchiroli

Date & Place: 18th & 19th January 2013, Gondwana University, Gadchiroli, Maharashtra

The workshop objectives covered a wide canvass in the context of setting up a STRC at Gadchiroli, with a core theme of value addition and livelihood issues of the largely forested and tribal districts of Gadchiroli and Chandrapur in Maharashtra. The present activity was initiated by RGSTC for generating inputs for the proposed STRC. The two-day workshop was attended by ~30 resource persons from Maharashtra and other states and ~100 invitees from GUG, and included 23 presentations by experts.

Inauguration function was presided over by Hon. Shri Sanjay Deotale (Environ. & Culture Minister, GoM), Hon. Shri Shantaram Potdukhe (Ex. Min of State-Finance, GoI) and Shri Abhishek Krishna, Dist. Collector, Gadchiroli, among others. Dr Anil Kakodkar was the Chief Guest and the keynote speaker.

As the attached list of presentations would indicate, topics covered include:
- **Value-addition to forest produce with significant stress on bamboo for crafts and as structural material**
- **Various technology packages as livelihood resource for rural sector**
- **Technology innovation at grassroots levels**
- **Web portals for wide access to local resources**
- **Education as a tool for empowerment and university as a resource**
- **Rural health and traditional medicine**
- **CILLAGE: An eco-system that incorporates the best of a CIty and a viLLAGE**

There were also several exhibition stalls set up by participating institutions exhibiting value added forest produce including Tasar silkworm and fish-stock enhancement, bamboo structures and crafts and herbal products. An on-site erection of bamboo reinforced cement frame structure for low cost buildings by forest department, Gadchiroli and a geodesic dome made from bamboo by Sampoorna Bamboo Kendra (Melghat) were additional highlights.

The workshop offered opportunities for formal and informal interaction that was indeed an expected bonus. The concluding program was a panel discussion session for the resource persons, chaired by Dr Anil Kakodkar, Chairman-RGSTC and participated by Shri B. Venugopal reddy, Divisional Commissioner, Nagpur and Dr Abhay Bang of SEARCH. **The recommendations** are summed up as follows:

- **GUG** is an important knowledge asset for the districts of Chandrapur and Gadchiroli and *GUG's development and strengthening is of prime importance*.
- **STRC,** as a knowledge and skills resource center, should be recognized as a step in this direction.
- **STRC** will showcase a facility that is unique, and probably first of its kind in the nation.

<div align="right">

Dr Prakash M Dolas (with inputs from resource persons)
Coordinator, STRC-GUG
Advisor, RGSTC

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