

Kerala State Higher Education Council

Minutes of the 24th Executive Body meeting held on 01.03.2021

The Twenty fourth Executive Body Meeting of the third KSHEC was held on 01.03.2021 at 11.30 am. through video conferencing. Prof.RajanGurukkal P.M. Vice Chairman presided.

The following members attended the meeting.

1. Prof.RajanGurukkal P.M. : Vice Chairman, KSHEC.
2. Dr. Gopinath Reveendran : Vice Chancellor, Kannur University
3. Dr.FathimathuZuhara : Member, Executive Body, KSHEC
4. Dr. J. Rajan : Member, Executive Body, KSHEC
5. Dr. R. K. Suresh Kumar : Member, Executive Body, KSHEC
6. Dr. K. K. Damodaran : Member, Executive Body, KSHEC
7. Dr.RajanVarughese : Member Secretary, KSHEC

Dr. Veena N. Madhavan IAS, Additional Secretary, Higher Education was also present

The following agenda was transacted and decisions taken.

Item No. 1 - Report on Examination Reforms (Prof. N. J. Rao Committee Report)

Resolved to approve the Report on Examination Reforms with all appendices.

It was further resolved to convene a meeting of Vice Chancellors to discuss the recommendations of the Report.

Report on Examination Reforms in State Universities

The Executive Body of the Kerala State Higher Education Council, in its meeting held on 08-07-2020, vide item no. (2) of the minutes had resolved to authorize the Vice Chairman of the Council to constitute a committee to prepare a Report on Examination Reforms in State Universities. In the circumstances, the Committee to prepare a Report on Examination Reforms in State Universities is hereby constituted with its Chairman and members as detailed below.(KSHEC – A3/365/Exm Ref – Committee/250/2020 Dated, Tvpm, 24-09-2020)

Committee to prepare a Report on Examination Reforms in State Universities

Sl. No.	Name	Designation	Capacity in the Committee
1	Prof. N.J. Rao	IISc, Bangalore	Chairman
2	Dr. Viraj Kumar	Visiting Professor, Divecha Centre for Climate Change, IISc, Bangalore	Member
3	Dr. Chandrasekhar R	Professor and Dean IIIT, Bangalore	Member
4	Dr. I. Ibnusaud	School of Chemical Science, Mahatma Gandhi University	Member
5	Dr. R. K. Suresh Kumar	Executive Body Member, KSHEC	Member
6	Dr. K. K. Damodaran	Executive Body Member, KSHEC	Member
7	Dr. Fathimathu Zuhara	Executive Body Member, KSHEC	Member
8	Dr. C. Padmanabhan	Associate Professor, Pazhassi Raja NSS College, Mattanur	Member

1. The Context of Examination Reforms

Examination Reforms are interpreted as reforming current practices in summative assessments as practiced in autonomous and non-autonomous Institutions and Universities of Kerala. Reform of the examination system was always a prominent theme in any discourse on education for several decades. Some of the major problems currently faced by the higher education system in India include:

- Fragmented higher education system.
- Neglect of cognitive skills and learning outcomes.
- Limited academic autonomy.
- Absence of merit-based career management and progression of faculty and institutional leaders.
- Neglect of research at universities and colleges, and research funding.
- Problems of governance and leadership in Universities and Colleges.
- Unwieldy expansion of affiliating system and neglect of undergraduate education.

Several examination reforms were suggested at State and National level, with hardly any impact on examination. There is a slow and continuous deterioration in the quality of summative assessment instruments (question papers). This undoubtedly led to a further reduction in the quality of learning. While everyone seems to acknowledge the unsatisfactory State of examinations, there have been no noticeable systemic or process changes. The reasons for this are many.

- The system of centralized examinations at a University is enormous and will have huge inertia, and any large system generally resists change.
- Any significant change to an extensive system will involve a tremendous amount of work, which everyone concerned will be reluctant to perform.
- All the stakeholders complain about examinations but expect the system to change.
- As there are no major objections and demands coming from the employers/industry and Governments other than expressing dissatisfaction occasionally, there has not been any motivation for the system to change.

In the name of confidentiality and transparency, the centralized system of examination and evaluation has evolved into a very rigid system.

- Standard responses to any item (question) in the examination paper are expected from students to facilitate centralized evaluation. It is impossible to include items

that test critical thinking. However, everyone talks about critical thinking in Humanities, Social Sciences, and Arts courses.

- Over time, because of the requirement of standard responses, many are merely items that test memory to reproduce material in a particular manner or carry out any activity in a specific way. This further led to the generation of guides for preparing students for such examinations.
- There is always the danger of some minor or major event disrupting the conduct of examinations.
- The centralized control of curriculum design and examinations has devalued the role of teachers.
- In western countries, most of the Universities and Institutions of higher education assess the students wholly on internal evaluation methods following the principle "those who teach should evaluate." The whole world has accepted the system followed in the western countries. The students coming out of those countries are valued higher than the degree holders of the Indian Universities (from Examination Reforms in Higher Education Institutions in India – Recommendations of UGC). Kerala State should also move towards the goal "those who teach should assess and evaluate." This will be vehemently objected to by the majority in the name of transparency. It should be noted that this transparency led to the current State.

Two major practices got entrenched into the Kerala State Education system.

- There has been no proper acceptance of the 'credit' system though it is appropriately accepted in the rest of India and the World. A survey of curricula in different Universities of Kerala indicates no correspondence between the number of credits, number of teaching hours per week, and the course content. For example, a 3-credit course may have five classroom sessions per week over a semester. Most of the courses have overloaded content resulting in superficial learning and confining to lower cognitive levels in examinations.
- The administrative interpretation of the workload of a faculty member resulted in some strange practices and overloaded curricula. Any changes suggested in any context somehow seem to threaten the job security of the faculty.

The policy decisions made to date were either treated as opinions of a few or considered too far from the existing practices. There were no accepted references or standards. In the last few years, several things happened, and some of them started gaining traction.

- Revised Bloom's taxonomy of learning, teaching, and assessment is becoming familiar to all faculty and Institutions across the country.
- Outcome Based Education (OBE) officially became a necessity in India and many other countries. OBE requires the system (Institutions, Departments, and Teachers) to state what it expects students should be able to do because of learning and communicate the same to the students in advance. While this appears to be a fair and straightforward requirement, some teachers around the World consider this as an imposition and constitutes a constraint even become a straitjacket. They believe it is against the spirit of education. Unfortunately, without stating what the students are expected to do, a teacher cannot plan instruction and assess their learning. There has been considerable research done that established that the simple act of communicating to the students what they should be able to do at the end of a course can significantly improve their performance.

Many HEIs have been writing outcomes, though not very well, for all courses and instituted mechanisms to compute the attainment of these outcomes.

- Many technical programs like Engineering are being accredited by the National Board of Accreditation (NBA).
- All higher education institutions must be accredited by the National Assessment and Accreditation Council (NAAC).
- Evaluation of student responses to summative assessment instruments consists of awarding marks at the level of individual items and aggregating them into a single 'percentage mark' or a Letter Grade.
- The UGC recommends a 10-point grading system with the following letter grades:

Letter Grade	Grade Point
O (Outstanding)	10
A+ (Excellent)	9
A (Very Good)	8
B+ (Good)	7
B(Above Average)	6
C (Average)	5
P (Pass)	4
F (Fail)	0
Ab (Absent)	0

The Universities can decide on the grade or percentage of marks required to pass in a course and the CGPA needed to qualify for a degree, taking into consideration the recommendations of the statutory professional councils such as AICTE, MCI, BCI, NCTE, etc.,

- The majority of HEIs follow the 'absolute grading system' also known as the Criterion-Referenced System. In this system, there is no need to arrange the students' performance on a bell curve. The relative grading is followed only when rank ordering among candidates from a given cohort is required.
- Covid-19 forced all educational institutions across the World to conduct all academic activities using ICT tools. Many of these ICT tools were available for more than fifteen years. There was not much acceptance till now by most HEIs to make the ICT tools an integral part of teaching-learning, assessment, and evaluation activities, despite strong recommendations of the national regulatory and accreditation bodies.
- Several government initiatives like Swayam and NPTEL and private service providers can offer a range of ICT services to HEIs on teaching-learning, assessment, evaluation, proctoring examinations, and accreditation.
- All HEIs are establishing IQACs (Internal Quality Assurance Cells) as required by the NAAC and the UGC.

2. Conceptual and Technology Preamble: Interpreting the Mandate

Educational assessment can be focused on the individual learner, groups of individuals, a specific program, or an Institution. According to the National Institute on Learning Outcomes Assessment (NILOA) concerning the learners, educational assessment is the systematic process of documenting and using empirical data on students' knowledge, skills, attitudes, and beliefs. (<https://www.learningoutcomesassessment.org/>). Assessment of learning is documenting knowledge, skills, attitudes, and learners' beliefs in measurable terms. It is a mechanism for providing instructors with data for improving their teaching methods for guiding and motivating students to be actively involved in their learning. As such, the assessment provides essential feedback to both instructors and students. The assessment gives us necessary information about what our students are learning and about the extent to which we are meeting our teaching goals. But the real power of assessment comes in using it to give feedback to students. In addition to providing the instructors with valuable information about students' learning, assessment should help them diagnose their learning. That is, assessment should help students "become more effective, self-assessing, and self-directed learners." (Angelo & Cross, 1993)

There is considerable evidence showing that **assessment drives student learning**. More than anything else, our assessment tells our students what we consider to be necessary. They will learn what we guide them to learn through our assessments. Traditional testing methods have been limited measures of student learning, and equally important, of little value for guiding student learning. These methods are often inconsistent with the increasing emphasis being placed on students' ability to think analytically, understand, and communicate at both detailed and "big picture" levels, and acquire life-long skills that permit continuous adaptation to workplaces in constant flux. Moreover, in many respects, assessment is the glue that links a course's components - its content, instructional methods, and skills development.

Assessment is often divided into formative and summative categories to consider different objectives for assessment practices. Formative assessment is carried out throughout a course or project. In an educational setting, formative assessment is used by teachers to consider approaches to teaching and the next steps for individual learners and the class. It would not be used for grading purposes. Formative assessment, also referred to as "assessment for learning," is used to aid learning. Assessment for learning is defined as "all those activities undertaken by teachers or students, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged" (Black and William 2004). Summative assessment is intended to measure learning outcomes and report those outcomes to students, parents, and administrators. It generally occurs after a class, a course, a semester, or an academic year in an educational setting. In the context of a course, summative assessments are typically used to assign students a course grade. It is also referred to in a learning context as an "assessment of learning."

Formative assessment is not practiced extensively for improving the quality of learning as the time available to the teacher is limited and can lead to a significant increase in his/her load. It is challenging to reach every student. However, with the availability of very cost-effective ICT solutions, it becomes possible to use formative assessment.

Technology: The available ICT tools can address many issues of teaching and learning, assessment and evaluation, administration, admissions, and placement. At present, both students and most teachers feel comfortable using internet devices for various daily needs. If the educational Institutions can significantly improve their ICT infrastructure, many of the current education problems can find solutions. This should be a joint effort of the Institutions, Universities, State Government, and Central Government. Covid 19 brought this need into sharp focus.

ICT can be effectively used both for formative and summative assessments and evaluations. The existing summative assessments (examinations) and evaluations are unsatisfactory as acknowledged continuously, at least informally, by all the concerned. These practices are majorly responsible for reducing the quality of learning by the students. ICT tools and services are available for

- designing dynamic item (question) banks that facilitate computation of attainment of all course outcomes, consisting of MCQ/MSQs and items requiring written short and extended responses,
- generating question papers (summative assessment instruments) can be automated using ICT tools with the paper setters' supervision,
- securely communicating examination papers (assessment instruments) to all the examination centers on the internet,
- automatically evaluating student responses to MCQ/MSQs and aggregating marks, and
- centralized evaluation of written responses, which can be a logistical nightmare every semester, can be resolved using ICT tools to enable the evaluators to do their work from their homes securely.

3. Suggested Reforms

No aspect of education can be addressed in isolation, as every aspect of an education system will influence every other. There are systemic, curriculum, technology, and assessment (examination) issues that require reforms.

3.1 Systemic

- 3.1.1 All higher education programs in Kerala are required to be conducted in Outcome Based Education (OBE) using the Taxonomy of Revised Bloom for the cognitive domain and Pierce-Gray taxonomies of Affective and Psychomotor domains where required. OBE represents the desirability of Learner Centricity.
- 3.1.2 Higher education undergraduate and post-graduate technical programs (Engineering, Pharmacy, MCA, and Management) should be conducted as per the guidelines given by the AICTE and seek the NBA accreditation.
- 3.1.3 Higher education undergraduate and post-graduate general programs (BA, BSc, BCom, and their equivalents) should be conducted as per the UGC guidelines. The Institutes offering those programs should seek NAAC accreditation.
- 3.1.4 The NAAC accreditation process recognizes and requires a higher education institution to perform several roles besides teaching and learning. Faculty members are responsible for fulfilling these roles, which include research and interaction with society. A faculty member's workload should be identified in this context, recognizing that a faculty member's pattern can change from year to year as required by the Department/Institute. The State level administration should recognize this.
- 3.1.5 The administrative interpretation of a faculty member's workload should suitably be altered to ensure meeting NAAC accreditation requirements, ensuring the existing faculty's job security, and ensuring Student-Faculty Ratios and Faculty Cadre Ratios.
- 3.1.6 All Colleges and Universities should immediately adopt ICT tools for all operations and communications related to planning and conducting examinations and evaluation.

3.2 Curriculum

- 3.2.1 The UGC's credit definition should be strictly followed, which happens to be followed across the World. A Credit is defined as a one-hour classroom session per week over a semester, one-hour tutorial session per week over a semester, and two hours of laboratory/fieldwork per week over a semester.
- 3.2.2 The course content should be designed to fit into the above definition of Credit.

- 3.2.3 There is need for developing multidisciplinary undergraduate education. This can be best achieved if curricula are designed as per the guidelines given by Prof. M. Vijayan's Committee of 2008, which the Kerala State Higher Education Council also constituted.
- 3.2.4 All programs should be designed and conducted to attain the Program Outcomes identified by the University/Institute in case of general programs or Program Outcomes identified by the NBA in case of technical programs, and the Program Specific Outcomes identified by the Department offering the program.

3.3 Technology

- 3.3.1 It has been established that using ICT can facilitate better learning while reducing the drudgery and open many ways of instruction in all subjects, which were not possible earlier. All HEIs must immediately acquire Academic Management systems and create adequate internet connectivity on the campus.
- 3.3.2 All HEIs must work with Government and Private agencies to establish reliable connectivity to all students at their homes.
- 3.3.3 All HEIs, through their IQACs, should organize training programs on integrating ICT into teaching, learning, and assessment for faculty, staff, and students regularly. While they could be in face-to-face mode, they can also be in online asynchronous mode.
- 3.3.4 Every HEI must have a dedicated cell focusing on Technology for Education encompassing the entire teaching/learning life cycle.

3.4 Summative Assessment (Examinations)

It is considered important by everyone that the graduates should acquire the ability to attain higher cognitive, affective, and psychomotor levels, think critically, and learn by themselves. These abilities need to be expressed in terms of Outcomes. The summative assessments should be designed to be in alignment with these Outcomes. The regulatory and accreditation processes only can facilitate the creation of good, higher education institutions. Technology and training hold the keys in this regard.

- 3.4.1 Technology has provided us ways to enable lifelong learning, and it can augment traditional classroom practices and revolutionize learning and evaluation methods. The use of technology for learning management systems and assessment (formative

and summative) is strongly recommended. (from Examination Reforms in Higher Education Institutions in India – Recommendations of UGC)]

- 3.4.2 The weightage given to Continuous Internal Evaluation (CIE) should be increased to 50%. The Department should decide the distribution marks under different assessments (tests, assignments, reports/term papers, fieldwork, laboratory work, projects, etc.). This gives considerable scope to the Departments to differentiate themselves. It also provides capacity for addressing higher cognitive levels, particularly in Humanities, Social Sciences, and Arts courses.
- 3.4.3 All course outcomes should be written as per a commonly established structure in the frameworks of Revised Bloom's taxonomy of cognitive domain and Pierce-Gray taxonomies of affective and psychomotor domains.
- 3.4.4 Assessment should be in alignment with the course outcomes. Well written course outcomes appropriately tagged with the addressed POs and PSOs, Cognitive Level, Knowledge categories, and the number of classroom/laboratory sessions taken is the starting point for designing summative assessment.
- 3.4.5 Every course should prepare an assessment plan for CIE that ensures addressing all course outcomes.
- 3.4.6 All courses should prepare item (question) banks for formative assessments, quizzes, tests, and local use of assignments.
- 3.4.7 University should create a large (say at least 1000 items) dynamic item (question) bank that addresses all course outcomes appropriately for every course from which SEE assessment instruments (examination papers) can be generated using software tools. The designated committees or individuals can moderate the assessment instruments generated by the software tool. Processes should be in place to ensure that the item bank remains dynamic.

[Question banks provide an attempt to integrate both teaching and evaluation. The document stresses the implementation of the question bank system as many experts' collaborative efforts will lead to the setting of good quality question papers. (from Examination Reforms in Higher Education Institutions in India – Recommendations of UGC)]

- 3.4.8 The design of SEE assessment instruments should be a two-step process: designing the assessment instrument's structure and generating similar multiple assessment

instruments. The assessment instruments with whatever choice-structure chosen should ensure the computation of attainment of course outcomes.

- 3.4.9 The controller of examinations at the University should make item wise marks obtained by each student available to the Colleges. Commercial tools are available for performing this task automatically.
- 3.4.10 The objective part of assessment instruments (MCQs and MSQs) should be evaluated using the technologies available.
- 3.4.11 The process of Question Paper validation by Board of Examiners should be streamlined. Appropriate resources including syllabus copies, textbooks must be made available to the BoE.
- 3.4.12 Periodic review of the Semester End Question Papers by a separate committee of domain experts is desirable. The report of such a committee may be made available to all the stake holders.
- 3.4.13 Provision must be made for periodic upgrading of the ICT infrastructure including security related to the Examination Processes.
- 3.4.14 Examination related work, innovations, research, publications must be officially recognized as legitimate part of the workload of a teacher.
- 3.4.15 Institutions should establish electronic classrooms to conduct proctored examinations as there will be an increasing need for students to get certified on various knowledge and skillsets to improve placements.
- 3.4.16 HEIs must embrace "Learning Analytics" as a critical source of input in overall learning management and facilitate their graduates' placement. We can use this data to enable the State to assess the State's human capital's strengths and weaknesses and create its vision for its future.

4. Schedule for Implementation

The required knowledge and open source and commercial ICT tools are available at present. All the proposed changes cannot happen across the State in a short period. It is necessary to work out a time plan to bring changes and work towards mobilizing the resources. The first two stages are suggested in the following. Based on the experience with Stage 1 implementation, Stage 3 can be planned.

Stage 1 (Expected duration: Two years)

- All Universities of Kerala implement credit system strictly by adjusting the content of all courses.
- Teacher's workload definition should be suitably redefined in consultation with the administration in the NAAC accreditation framework, ensuring job security of the existing faculty, Student-Faculty Ratios, and Faculty Cadre Ratios.
- Identify all the activities of the office of Controller of Examinations that can be performed online at Institutions and Universities and prepare a requirement specification document for ICT tools needed for software tools for all activities related to examinations at multiple centers simultaneously and for teaching-learning activities.
- Create technology units in the IQACs of all Colleges and Universities to support faculty and students on all issues concerning online teaching-learning processes, assessment, and evaluation.
- Educate Managements of Institutions, Faculty, and Students on the need and the importance of suggested Examination Reforms to improve the placement opportunities.
- Create a faculty team, with one or two selected from each Department, at all Colleges to be trained in OBE, online teaching-learning processes, and assessment.
- Define what constitutes quality summative assessment.
- Create sample item (question) banks for courses for both formative and summative assessments from several programs.
- Define mechanisms for making the item banks dynamic and setting semester-end examination papers from the created item banks.

Stage 2 (Expected duration: Two years)

- Initiate performing all the online activities of the office of the Controller of Examinations using the procured software services.
- Establish mechanisms for creating autonomous clusters of Colleges.
- Design curricula of programs at some sample clusters of Colleges in the UGC Credit framework and redefined teachers' workload.

- Design assessment instruments for end-semester examinations for the courses with item (question) banks developed in Stage 1. Based on these experiences, streamline the process of designing examination papers and maintaining the quality.
- Every College creates its plan for using ICT for all its academic activities.
- All newly recruited faculty will go through online training in pedagogy, OBE, NAAC accreditation, and ICT for education under the Faculty Development Center of the KSHEC and HRD Centers in Universities.

Several resource documents on OBE, Assessment, Credit System, Course Design, Program Outcomes and Curriculum Design are included as Annexures.

Annexure 1

Recommendations of Examination Reforms Committee of Kerala State Higher Education Council in 2011

Provision of a syllabus-based framework for improved assessment practice

1. A suitable template with guidelines relating to the scope and structure of the syllabus statement of each separate course should be prepared, and its use made mandatory by the University. The syllabus statement for each course (issued by the relevant Board) should include a detailed note on the recommended assessment scheme, especially the internal component.
2. a) The duties and responsibilities of Boards of Studies in each area should be amended to include a definite provision for syllabus preparation in keeping with the guidelines and regular reviews.

b) Administrative and financial provision should be made for workshop-type sessions for syllabus development, with the option of including qualified resource persons as special invitees. Manuals and library resources and secretarial assistance should be available at the workshop venues. Final committee-mode decision making (if needed) must be based on workshop output.
3. Members of Boards should be given orientation/training relating to curriculum design and educational technology. A permanent facility for this purpose should be set up by the University.

Upgrading the technical support and personnel resources at the college level

4. All teachers need to be given training in the areas of assessment and educational technology. A long-term strategy for training teachers in assessment with a special focus on the internal/ in-term component should be developed and implemented using both face-to-face and distance modes. The specific needs of different subject areas should be recognised and addressed. The relevant boards should be associated with the overall planning of these programmes. The process needs to be envisioned as becoming self-supporting over time.
5. College departments should maintain an up-to-date reference file relating to assessment rules and guidelines. The approved schemes of Internal Assessment of various departments should be available to students in a clear form. The facility for dealing with difficulties/grievances relating to IA should be accessible to students.
6. College libraries should have a collection of manuals and reference books, CDs on assessment, curriculum, and educational technology for the use of teachers. Subject-wise collections of question papers and IA tasks (along with notes, critical comments) should also be obtained, and made accessible to teachers.

Improving the external final examination

7. Boards should undertake a review of models and recent question papers, giving priority to compulsory courses. Useful improvements can be made without waiting for the training workshops to achieve wide coverage. A plan to review all question papers over the next several months should be prepared by each Department. Reports on this exercise should be required by the Academic Council.
8. Variations in the design and physical structure of question papers (and answer booklets) should be tried out. These may include separate sections for objective-type questions, short answer and essay questions, restricted response space to encourage precision, timed sections, flip reduced answer sheets.
9. Paper setting by teams through modularized setting, and section-wise marking by markers in teams should be introduced in a phased manner.

10. Small-scale and experimental question banks should be set up in selected departments for selected courses. A task force to plan a centralized question bank with a state-level component and separate components for individual universities may be set up.
11. Measures to maintain the integrity of the system should be reviewed and extended at the CoE level. These may include parallel versions of question papers, conducting examinations in-camera, videorecording of opening packets of question papers, and packing of answer books. Video recording of viva-voce examinations should be considered and initiated in a phased manner.

Bar-coding of answer books and response sheets should be taken up. Delivery of question papers in an electronic mode for printing at local centers on the day of the examination should be explored.
12. A clear policy for dealing with unfair practices relating to Internal Assessment should be evolved and put in place at the college level. Prevention through ensuring transparency in grading, attending to convenience aspects, and education regarding plagiarism should also be attended.
13. Under the head of student welfare, a component specifically concerned with examination-related issues (especially stress and anxiety) should be established. Accessibility to students should be a priority for counselling activities. Support from the community, including student volunteers, could be canvassed.
14. A scheme to support innovation and experimentation in assessment at various levels, administratively and financially, should be formulated. Potential awardees should be reached through vigorous publicity. Support of an academic nature through accessible resource person/institution should also be provided. The presentation of reports at a suitable forum should be a requirement. The implication of findings from such experiments for improving assessment practice on a much wider scale should be noted and acted upon.
15. Research on various aspects of examinations should be taken up at each University and selected colleges, according to an overall plan developed through consultation to avoid duplication. The Departments of Education should take the lead. Research

scholars in the social sciences could be encouraged to participate by offering access to databases in examination branches.

Item No. 2 - Report and Accounts of International Conference on Thoughts and Ideas for a Resilient Kerala

Approved the Report and Accounts of International Conference on Thoughts and Ideas for a Resilient Kerala

Report on International Conference on Thoughts and Ideas for a Resilient Kerala 27-30 December 2018 Institute of Management in Government, Thiruvananthapuram, India Background:

This conference debated about the multidimensional aspects of resilience in the context of the heavy rains and devastating floods and landslides in Kerala in 2018.

The conference paid homage to the lives lost due to floods and landslides, acknowledged the instant, heroic and selfless efforts of ordinary people such as fisherfolk, young people, various voluntary groups and local administration in the search and rescue efforts. The conference also acknowledged the leadership provided by the State and Central governments, including the contribution of military, National Disaster Response Force, police and the media.

The conference, through various presentations and discussions, analysed the multidimensional aspects of disasters and resilience, taking note of the global experiences and giving due attention to local relevance and appropriateness.

In addressing the issue of rebuilding resilience the Conference paid specific attention to the following:

- 1) Kerala's cultural and socio- economic contexts;
- 2) Aspiration to build a modern, sustainable and resilient society;
- 3) United Nation's Sustainable Development Goals; and
- 4) The United Nation's definition on resilience: i.e. *"the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management."*

Environment, Infrastructure, Livelihoods and Culture are the key themes discussed during the conference. However, the conference organisers recognise other critical issues that are key to build a resilient Kerala--such as food security, nutrition, health (including mental health and psychosocial support), education and water and sanitation.

The conference approached the future with a sense of hope, optimism and pragmatism. The conference recalled the words of Mizuta Masahide, the Japanese poet who said, *"since my house burned down, I now own a better view of the rising moon"*.

Key observations and recommendations:

Planning: The key to disaster preparedness and risk reduction

- 1) The Kerala floods in 2018 is a wakeup call to strengthen disaster preparedness and risk reduction measures. The next flood, cyclone, storm surge or disease outbreak is not a question of whether, but when. Failing to plan is planning to fail. This conference recommends the government and civil society actors to give priority to disaster preparedness and risk reduction measures which needs to be an integral component of government's vision, planning and resourcing at all levels. These will require long term commitment, planning and resourcing, fully taking into account the principle of subsidiarity.

Weaker sections in society will need special attention

- 2) Disasters impact different people in different ways and some are impacted more severely than others. Equally some people can play extra ordinary role in search and rescue efforts as was demonstrated during the floods. Initiatives and investments are needed to reduce the vulnerabilities of such constituencies and strengthen their skills. Young people, children, differently abled people, women, transgender people, fish workers, tribal people and poor people should find a special place and role in such initiatives. Some specific priority actions are- teaching children and young people to swim and first aid, teaching fish workers, taxi drivers and teachers life saving first aid and public health.
- 3) Floods devastated livelihood options, especially for women and poor people. This conference recommends defining livelihood in the context of floods and disasters (in terms of geography, social groups et al) and develop a fresh approach prioritising woman, tribal et al. This will also help to optimise the impact of relevant NREGA schemes.

Transition to renewable energy unavoidable

- 4) Kerala imports 70% of energy from elsewhere. This unsustainable approach needs course correction. This conference recommends unprecedented government investment to strengthen solar power generation at household levels. Investments are also needed to upgrade the skills of the staff of Kerala State Electricity Board so that they can be equipped to embrace this change and be relevant and fit for future.
- 5) Renewable battery-based energy and smart vehicles is the future. Kerala's energy future can be better served by a greater focus on renewable energy. An energy generation and transmission system that can withstand disasters was placed as key to a resilient Kerala. There is tremendous scope in Kerala for wind and solar energy generation with the state government placing it as priority. This conference recommends making Kerala a production hub rather than just a consumer base. "Made in Kerala" (and not "seen in Kerala") should be the approach.
- 6) Kerala is uniquely placed to bring a paradigm shift in the way in which we approach 'smartification' of landscape. This conference recommends, instead of building smart

cities, through an integrated approach government may aim “think big” and build a ‘smart state’ instead. A wholistic approach is needed.

- 7) “Industrial revolution 4.0” offers a great opportunity to build a resilient Kerala. Nano technology, gene sequencing, renewables and Quantum computing are integral to make such a revolution happen. Higher education centres are key and could play a catalytic role in such a revolution. However, the higher education centres today are not equipped and fit for the future. This conference recommends the government makes a conscious decision to invest to upgrade higher education centres into centres of excellence.

Infrastructure development: An integral component of disaster prevention and management

- 8) There is a need to ensure that infrastructure development do not contribute to aggravating floods and landslides. A detailed assessment ~~will~~ need to be undertaken on how current infrastructure development has altered the hydrology aggravating the flood situation. This should be followed through a systematic corrective action based on a clear understanding of hydrology as a priority. Environmental considerations should form the starting point for any new infrastructure development and the rebuilding of infrastructure that has been destroyed during the floods.
- 9) Every effort should be made to reduce the life time carbon foot print of infrastructure development so that the New Kerala has a strong foundation of sustainability and resilience. Efforts should be made to prepare a “disaster heat map” (instead of ‘disaster heat map’, say ‘vulnerability map’ since it is a widely accepted and easily understood terminology) taking into account the probability of disasters and the intensity of consequences and infrastructure development should make every effort to keep the risks at acceptable levels.
- 10) Modernising transport is key to make Kerala resilient for future shocks. Emphasis should shift away from movement of vehicles to movement of people and the share of public transport needs to be increased significantly. This conference recommends making highways safe, exploring the feasibility aerial rope way transport system and building/ making bicycle pathways along the coast. Positioning Kerala as a preferred destination for bicycle tourism should be high on the agenda.

Strengthening disaster preparedness

- 11) Building a culture of disaster preparedness is key to reduce loss to life, assets and property and to enhance resilience. The absence of this was evident during the landslides and floods in 2018 and despite early warning many people opted not to heed to such warnings aggravating the problem. In the absence of previous experience there is a tendency to remain complacent. Experience from several countries that face disasters on a regular basis (for example Cuba) clearly indicates how disaster preparedness and social mobilization could help to significantly reduce disaster impacts. Hence preparing people to face disasters should receive utmost attention.
- 12) Such awareness generation efforts should cover all people, and this should become an important responsibility of local administration. Disaster preparedness should become

an integral component of the school and college syllabus so that within the next few years we will be able to create a generation capable of withstanding and dealing with any disaster.

- 13) Within the framework of the current system of planning the conference encourages all Panchayats to prepare a disaster management plan clearly indicating the current level of disaster risks and vulnerabilities, proposals to address the vulnerabilities/ risks, scenario and response plan to respond when disasters strike – covering rescue, relief and rebuilding.
- 14) The conference encourages each Panchayat to create a voluntary team for rescue and relief operations, particularly involving fisher-folk, agriculture workers, car, bus and auto-drivers, professionals working in government, voluntary and private sector organizations, students, women, etc. and they be given appropriate training in rescue and relief measures.
- 15) The conference encourages vulnerable Panchayats to create an action force and system for rescue and relief before the 2019 monsoon season.

Culture: An integral component of disaster prevention and mitigation

- 16) Disasters also offer unique opportunities in the hands of able administration. Creative and innovative ideas emerge after every disaster and such ideas are key to rebuild and strengthen resiliency. The presentation on the *Chekkutty* dolls was both inspiring as well as a demonstration of the emergence of entrepreneurship in the context of a disaster. This conference recommends creating an enabling ecosystem to nurture, harvest and implement such innovative ideas.
- 17) Several issues related to a new cultural politics and practise in the context of floods were discussed. This conference recommends organising an annual Indian cultural congress.
- 18) This conference recommends art and culture in all its forms and practices be optimised to help healing, recovery to build a resilient Kerala. While the existing agencies may be used to take this forward, this flood is a wakeup call/ opportunity to optimise art for public good.
- 19) The flood is a reminder and opportunity to set up centres of excellence of arts to advance the idea of humanity and resilience (including disaster preparedness and risk reduction). These centres could act as nodal points for dissemination on capacity building.

Evidence, science and better environmental governance: Catalysts to build resilience

- 20) Climate change is predicted to unleash several negative impacts in addition to extreme weather events witnessed in Kerala during 2017 and 2018. In particular the most densely populated coastal regions are vulnerable to a number of changes including sea level rise and salinity intrusion affecting agriculture and other economic activities. Such changes need to be factored in disaster preparedness which need to be mainstreamed into land use planning.
- 21) The science and evidence base of disaster management needs considerable improvement. There is very limited ~~problem~~ solution-oriented disaster related research

taking place in the research and academic institutions in the State. Most ongoing efforts are highly fragmented severely limiting their application on the ground. Immediate efforts need to be made to undertake coordinated research involving key Research and Development institutions within and outside the state to support disaster related responses.

- 22) The linkage between science and policy making, planning and implementation remains extremely weak. This needs to be addressed through more problem / policy focused research ensuring that science outputs are fully integrated with public policies and plans.
- 23) As part of improving environmental management, flood and landslide mapping should be undertaken and completed expeditiously, and a land zoning should be undertaken fully considering the vulnerability to flooding, landslides and storm surges. The maximum flood level reached should be marked on the maps and on the ground so that people have a clear picture of potential vulnerabilities. Also, the areas which are identified as vulnerable to land slides should be identified and indicated in the maps.
- 24) Building standards should be reviewed and revised taking into the potential risks and these standards should be strictly enforced.
- 25) Disaster prevention and preparedness should be mainstreamed into the functioning of all organizations and departments. Every department/ agency should have clear guidelines on the “dos” and “don’ts” fully considering the vulnerability to disasters and these need to be strictly adhered to.

Accounts

Income and Expenditure Statement

Total fund received for ‘International Conference of Thoughts and Ideas for Resilient Kerala’ under the head of account 2202-03-112-87 (plan) is Rs. 50 lakh. Amount received on 26.12.2018 Expenditure till date Rs. 33,51,134/-.

Sl.No	Activities	Expenditure
1	Honorarium for Kathakali Artists & Mohanaveena Artists	1,25,000/-
2	Video shooting & Photography	2,00,000/-
3	Various expenses including Printing & designing/Taxi/TA/Telephone/Internet/ Stationery/ Sanchi Bags	3,49,081/-
4	Air fare	6,58,266/-
5	Expenses including administration charges, Office rent, printing of posters, Labour charges & payment to KTDC Hotel Samudra	2,73,006/-
6	TA/DA including Taxi Charges	3,35,201/-
7	TA/DA taxi charges, Air fare & Payment to Hilton Garden Inn	1,77,453/-
8	Travel Expenses	7,99,522/-

	Digitalisation and recoding of the Programme	
9	Hall rent & Hostel Room rent to IMG	3,46,330/-
10	Payment to C-Dit towards transcription charges for the videos	83,895/-
11	Payment of TA for attending editorial Meeting	3,380/-
	Total	Rs. 33,51,134/-

Bills to be submitted before steering committee

Bills/voucher which are not approved by the core committee since the bills/vouchers are related to October, 2018 is before getting Administrative sanction for the International Conference of Thoughts and Ideas for a resilient Kerala.

Sl.No	Activities	Expenditure
1	Office rent for October, 2018	25,000/-
2	Secretarial help for October, 2018	30,000/-
3	Accountant help for October,2018	25,000/-
	Total	Rs. 80,000/-

Item No. 3 -Notification for Unnathi Bhavan.

Resolved to initiate steps for issuing notification inviting proposals for the purchase of property for Unnathi Bhavan (head quarters for the KSHEC). Notification shall specify the Council's requirements in terms of land and building, preferred location, value of the property etc. and the same may be published in the website of the Council /newspapers.

Item No. 4 - Age Relaxation for Trans Gender Students in admissions to UG programmes

Resolved to recommend to the Government and Universities to do away with upper age limit for admission to UG and PG programmes in state universities except in the case of those programmes where age limits are prescribed by regulatory bodies or in the case of Physical Education programmes where age limits are already fixed.

Item No. 5 - Payment of remuneration to Sri. Jyothichoodan – Govt. Letter

Resolved to comply with the Government Order No. 181/2021/H/EDn. Dated 01.02.2021 regarding payment to Sri. G. Jyothichoodan amounting to Rs. 1,20,000/- (Rupees One Lakh Twenty Thousand only)

Item No. 6 - Seminar in honour of Prof. K. N. Panikkar .

Reported - A seminar in honour of the noted historian Prof. K.N.Panikkar was held on 28.02.2021 on the theme *Democracy, Secularism and Socialism*. Prof. Romila Thapar (JNU), Prof. Prabhat Patnaik (JNU), Prof. Irfan Habib (AMU) and Prof. Rajeev Bhargava (JNU) participated in the programme. The Kerala Council of Historical Studies (KCHR) and Chintha publishers, Thiruvananthapuram were also associated with the programme. The seminar was organised both in online mode for the benefit of teachers, students, research scholars and the general public. An offline meeting is also planned.

Item No. 7- Kairali Research Award Presentation.

Reported

Kairali Research Awards: 2019-20

Members of the selection committee

- (i) Dr. P. Balaram, Former Director, Indian Institute of Sciences, Bengaluru as Chairman
- (ii) Dr. Prabhath Patnaik, Former Professor, JNU (Member)
- (iii) Dr. E.D. Jemmis, Professor of Theoretical Chemistry, IISC, Bengaluru (Member)
- (iv) Prof. Satchidanandan, Noted Poet and Critic, (Member)

Brief profile of the awardees

Kairali Global Lifetime Achievement Prize for Researchers

Prof. Marthanda Varma Sankaran Valiathan
Ch.M, FRCS, FRCS (C), FRCP, D.Sc (h.c)

Marthanda Varma Sankaran Valiathan (born 24 May 1934) is an [Indian cardiac surgeon](#). He was an erstwhile President of the Indian National Science Academy and National Research Professor of the Government of India

He was awarded the [Padma Vibushan](#) in 2005 for his contributions to health technology in India. He was made a Chevalier in the [Ordre des Palmes Académiques](#), an honour bestowed by the French government, in 1999. He received the Dr. Samuel P. Asper International

Award from the Johns Hopkins University Medical School in 2009 for his contributions to international medical education.

After about twenty years at Sri Chitra, Dr. Valiathan became the Vice-Chancellor of the newly set up Manipal University (then MAHE, Manipal Academy of Higher Education).

After laying down office as Vice-Chancellor in 1999, he was awarded a Senior Fellowship by the Homi Bhabha Council to pursue a study of Charaka, which culminated in the publication a book "The Legacy of Charaka". Later on, as a National Research Professor, he carried out a study of Sushruta and Vagbhata and completed the series of Legacy volumes on the 'Great Three' of Ayurveda

Prof. K. N. Panikkar

K. N. Panikkar (born 1936 in Guruvayoor, Kerala.) is a [leftist Indian historian](#), associated with the [Marxist school of historiography](#).

K. N. Panikkar has written and edited a number of books, including *A Concerned Indian's Guide to Communalism* and the ICHR volume on *Towards Freedom, 1940: A Documentary History of the Freedom Struggle*.

His methods and his expressed positions in public life have evoked harsh criticism from exponents of [Hindu nationalism](#), particularly during the period of Bharatiya Janata Party government of 1998 to 2004.

Panikkar has been active in criticising the rise of "Nationalist" history in India. His books include *Against Lord and State: Religion and Peasant Uprisings in Malabar; Culture and Consciousness in Modern India; Culture, Ideology and Hegemony – Intellectuals and Social Consciousness in Colonial India*, and *Before the Night Falls*.

He was appointed by the government of Kerala as chairman of an Expert Committee that looked into the complaints raised from various quarters concerning new textbooks introduced to state-supported schools. The committee submitted its report in October 2008

Dr. M. R. Raghava Varier

M. R. Raghava Varier (born 15 January 1936), also **M. R. Raghava Warriar**, is an Indian [epigraphist](#) and historian, formerly a Professor at the [University of Calicut](#), from [Kerala](#). He currently lives in Cheliya, Edakkulam-[Koyilandi](#) in Kerala.^{[1][2][3]} Varier is generally considered as left-of-centre historian by political analysts.^[4]

Varier graduated from University of Calicut in 1972, and was trained in epigraphy at the Office of the Chief Epigraphist to the Government of India, Mysore (1973). He holds a post graduate degree in "Malayalam Language and Literature" from Calicut University (1976), M. Phil (1977–80) in History from [Jawaharlal Nehru University](#), New Delhi and doctoral degree (1986) on the folk songs of northern Kerala from the University of Calicut. From 1997 to 1999, he served as Senior Fellow in the Cultural Department, Government of India (New Delhi).^[3]

Varier has been invited to a number of institutions, including Maison des Sciences de l'Homme, Paris under the Indo-French Programme (2004), [Exeter University](#) (funded by Art and Humanities Research Board, London), [University of Tokyo](#) (2010), [De Montfort University](#), London and the [British Museum](#) (2012). He served as the President - Epigraphy, Historical Archaeology and Numismatics in the 1998 [Indian History Congress](#).

Kairali Lifetime Achievement Award

- **Dr. Scaria Zacharia**

He contributed many empirical and theoretical developments in literary historiography, textual analysis, comparative literature, translation studies, folklore, and cultural studies. In the area of Jewish Malayalam studies and have won Humboldt Research Fellowship. He has more than 30 books and 180 articles to his credit.

- **Dr. Sabu Thomas**

He is presently the Vice Chancellor of Mahatma Gandhi University and Professor of Polymer Science & Engineering, School of Chemical Sciences and Founder Director, International and Inter University Centre for Nanoscience and Nanotechnology of the Mahatma Gandhi University. His areas of academic research include [polymer nanocomposites](#) and cellulose nanocomposites. He is the editor of the [Elsevier](#) journal Nano-Structures & Nano-Objects. He has received a number of awards for his contributions in the area of research.

- **Dr. P. Sanal Mohan**

He presently a Professor in the School of Social Sciences of Mahatma Gandhi University, Kottayam, India. He was a Visiting Faculty Associate at the Centre for the Advanced Study of India, University of Pennsylvania, USA in 2011. He has done wide range of acclaimed research works of Ethnography, Social History, Modernity/Colonial Modernity, Social Movements and Dalits, Christianity, Comparative Histories, Social memory and History of Mentality.

Kairali Gaveshaka Puraskaram

(1) Arts and Humanities

Name of the Awardee: **Dr. Sucheta Sankar V**

Mobile Number: 9447857758; Email ID: sucheta.sankar90@gmail.com

Permanent Address

'Sreerangam' Govt. Relief LPS (Kaattil) Lane, Arasummoodu, Kulathoor P.O.,
Thiruvananthapuram

University from which Ph.D. degree is obtained

University of Kerala in 2019

Title of the Project and Research Proposal

The Mobilities Archive: Travel Narratives, Gender, and Keralam

(2) Biological Science

Name of the Awardee: **Dr. Sreelekshmi S**

Mobile Number: 9544984971; Email ID: sreelekshmis87@gmail.com

Permanent Address

Vijaya bhavan, Kulathoor prayar PO, Kottayam-686541

University from which Ph.D. degree is obtained

Cochin University of Science and Technology (CUSAT) in 2018

Project Title and Research Proposal

Tracing carbon transfer and assimilation in food web structure across mangrove habitats in Kerala

(3) Chemical Science

Name of the Awardee: Dr. Jabeen Fathima M.J.

Mobile Number: 09846306468; Email ID: jabeen.fatima.mj@gmail.com

Permanent Address

Manamkeri House, P O Edavilangu, Kodungallur, Kodungallur, Thrissur, 680671

University from which Ph.D. degree is obtained

University of Calicut

Project Title and Research Proposal

POLYANILINE/CuCo2O4 BINARY FIBER ELECTRODE FOR CABLE SUPERCAPACITORS (PANI/CUCO)

(4) Physical Science

Name of the Awardee: Dr. Anshida Mayeen

Mobile Number: 7511134133; Email ID: anshidaanshu@gmail.com

Permanent Address

Kochupeedikayil House, Karukayil Ward, Avalookkunnu P.O, Alappuzha-688006

University from which Ph.D. degree is obtained

Mahatma Gandhi University in 2019

Title of the Research Proposal

Interface Engineered Biocompatible Piezoelectric Nanocomposites for Implantable Device Applications

(5) Social Science

Name of the Awardee: Nil

Kairali Gaveshana Puraskaram

(1) Arts and Humanities

Name of the Awardee-Dr. R. Santhosh Manicheri

Mobile Number: 9495781047; Email ID: manicherisanthosh@gmail.com

Present University/College/Institution Address

Assistant Professor of Malayalam, Government Brennen College, Thalassery

University from which Ph.D. degree is obtained

Mahatma Gandhi University

Project Title

സ്ഥാനപ്പെട്ടലിന്റെ രാഷ്ട്രീയം: അനുഭവചരിത്രവും അനുഭൂതിചരിത്രവും മലയാളത്തിലെ ഗോത്രകവിതയുടെ വിവരണവും വിശകലനവും

(2) Biological Science

Name of the Awardee-Dr. Suboj Babykutty

Mobile Number: 9995068223; Email ID: suboj.babykutty@mic.ac.in

Present University/College/Institution Address

Assistant Professor, Department of Zoology, Mar Ivanios College, Thiruvananthapuram-695015

University from which Ph.D. degree is obtained

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCE AND TECHNOLOGY, TRIVANDRUM, KERALA

Project Title

Targeting tumoural iNOS to enhance immune surveillance in triple negative breast cancer

(3) Chemical Science

Name of the Awardee-Dr. Franklin J.

Mobile Number: 9746825486; Email ID: franklinshc@gmail.com

Present University/College/Institution Address

Assistant Professor in Department of Chemistry, Sacred Heart College, Thevara, Kochi

University from which Ph.D. degree is obtained

University of Konstanz, Germany

Project Title

VEGF specific Liposomal siRNA carriers for tumor angiogenesis inhibition

4. Physical Science

Name of the Awardee-Dr. Madhu S. Nair

Mobile Number: 9447364158; Email ID: msn@cusat.ac.in

Present University/College/Institution Address

Associate Professor , Artificial Intelligence & Computer Vision Lab, Department of Computer Science, Cochin University of Science and Technology (CUSAT), Kochi - 682022.

University from which Ph.D. degree is obtained

Mahatma Gandhi University

Project Title: Automated Validation of Aneurysm in Brain (AVAB) using Machine Learning Techniques.

(4) Social Science

Name of the Awardee-Dr. Devi Soumyaja

Mobile Number: 9972309166: Email ID: devisoumyaja@gmail.com

Present University/College/Institution Address

Assistant Professor, School of Management Studies, Cochin University of Science and Technology

University from which Ph.D. degree is obtained

Indian Institute of Technology (IIT) Madras

Area of Research: Human Resource Management

Project Title

Sustainable Menstruation Management and Menstrual cups- An exploratory study on awareness and attitudes in the state of Kerala

1. Physical Science

Name of the Awardee-Dr. Madhu S. Nair

Mobile Number: 9447364158; Email ID: msn@cusat.ac.in

Present University/College/Institution Address

Associate Professor , Artificial Intelligence & Computer Vision Lab, Department of Computer Science, Cochin University of Science and Technology (CUSAT), Kochi - 682022.

University from which Ph.D. degree is obtained

Mahatma Gandhi University

Project Title: Automated Validation of Aneurysm in Brain (AVAB) using Machine Learning Techniques.

2. Social Science

Name of the Awardee-Dr. Devi Soumyaja

Mobile Number: 9972309166; Email ID: devisoumyaja@gmail.com

Present University/College/Institution Address

Assistant Professor, School of Management Studies, Cochin University of Science and Technology

University from which Ph.D. degree is obtained

Indian Institute of Technology (IIT) Madras

Project Title

Sustainable Menstruation Management and Menstrual cups- An exploratory study on awareness and attitudes in the state of Kerala.

Resolved to organise an award presentation function.

Item No. 8 -Planning Board –Short term Project on “Building up Database of the Keralite – Academic Diaspora around the Globe

Reported the sanctioning of the short term Project by the State Planning Board.

Short-term Project on Building up Database of the Keralite-Academic Diaspora around the Globe**Proposal**

Building up Database of Keralite-Academic Diaspora (Scientists, Social Scientists, and Humanities Experts in Universities and Research Institutions abroad Medical Professionals Technocrats/CEOs of Multinational Establishments, Economists, Environment/ Biodiversity/ Sustainability/Resilience/Disaster Management Experts working in World famous

Universities and Research Institutions the world over, and specializing in emerging areas of knowledge.

The data are required for:

- a) to attract, share, involve, integrate and incorporate Keralite-academics in advanced fields of science, technology, and social sciences for the quality enhancement in the higher education institutions in Kerala.
- b) to effectively implement the Erudite Scholar-in-Residence cum Brain Gain programme;
- c) to launch the programme of brain circulation by bringing the experts as short-term teachers, part-time collaborators, and co-supervisors in researches in the universities;
- d) to locate experts in science-tech hybrid fields relevant to the transformation of higher education to knowledge economy and enhancement of the states' intellectual property contribution;
- e) to establish communication directly with the experts who possess the expertise
- f) to identify experts in high-tech industries and invite them for generating ideas for the reconstitution of the curricula of the higher education institutions;
- g) to provide advisory support to the government by using the above data base in relevant matters of expertise.

Method of Data Mobilization:

a) Direct Search

1, International: Indian Research Information Management (IRIM) service developed by the Information and Library Network (INFLIBNET) Centre, a web based source and free software service to the academic and R&D organisations in India that can be depended upon for data. Its portal facilitates the academic, R&D organisations and faculty members, scientists to collect, curate and showcase the scholarly communication activities and provide an opportunity to create the scholarly network. IRIN can share national data that help integrate the existing research management system such as HR system and institutional repository. Out of this data pool, the Keralite diaspora data can be sorted with the help of a researcher.

2. National: IRIM also has a national data pool called VIDWAN, the premier database of profiles of scientists/researchers and other faculty members working at leading academic institutions and other R & D organisation involved in teaching and research in India. It provides important information about expert's background, contact address, experience, scholarly publications, skills and accomplishments, researcher identity, etc.

3) Web-based Institutional Combing: Web based data combing of the faculty of the Universities and Research Institutions can help generate details of the Keralite diaspora academics. An efficient Researcher can finish in three months the data combing of all universities of global visibility.

b) Indirect Search

1. Data generation of academics through correspondence with the persons and Institutions abroad by using contacts notified in the Internet
2. Data mobilization based on the personal contacts of academics, scientists, social scientists and technologists in the universities of the state
3. Correspondence with Regional Malayali Academics Organisations
4. Correspondence with Malayali Professional Organisations abroad can share preliminary data about Medical Professionals, Technocrats/CEOs of Multinational Establishments
5. Correspondence with Malayali Students Organisations abroad can share preliminary data about Medical Professionals, Technocrats/CEOs of Multinational Establishments
6. Correspondence with the Parents of the Students/Researchers/Academic working in universities and research establishments abroad
7. Data call notification through the website of KSHEC
8. Data call notification through the website of Universities in the state

Duration of the Project: Six Months

Budget: Rs. 3 Lakhs

Personnel	Responsibility	Duration	Salary per Month
1 Researcher	Correspondence and PR jobs	6 months	Rs. 20,000 x 6
1 Data Entry Assist	Data entry and computer jobs	6 months	Rs. 20,000 x 6
Travel & Contingency			Rs. 40000
Overhead			Rs. 20,000
Total			Rs. 3,00,000

Item No. 9 -Draft Guidelines for New Inter University Centres.

Deferred

Additional Agenda

Item No. A1 – Salary revision of Contract / Daily wage employees of KSHEC based on Government GO No. (P)29/2021 Fin. Dated 11.02.2021.

Resolved to implement salary revision for the following contract and daily wage employees of the KSHEC based on the Government Order No. 29/2021 Fin, dated 11.02.2021

Sl. No.	Name	Post & Mode of Engagement
1.	Shri. Krishnakumar P.J.	Assistant, O/o the Member Secretary, Contract
2.	Smt. Divya. A. S	Assistant, O/o the Vice Chairman, Contract
3.	Shri. Vysakh. B	Office Attendant, Contract

4.	Smt. Vimala. S	Data Entry Operator, Contract
5.	Shri. Sandeep S. Nair	Systems Analyst, Contract
6.	Smt. Lathika K.	Assistant, Contract
7.	Shri. Dileep M.	Research Associate, Contract
8.	Shri. Raj Kumar B.	Assistant, Contract
9.	Smt. Sherin A.S.	Data Entry Operator, Contract
10.	Shri. Selvarajan K.S.	Driver, Contract
11.	Shri. Syam S.	Data Entry Operator, Daily Wages Basis
12.	Smt. Ajitha S.	Data Entry Operator, Daily Wages Basis
13.	Shri. Liju K. L	Driver, Daily Wages

OA

Item No. OA 1- Committee to study the draft National Science Technology and Innovation Policy.

Resolved to constitute the following committee to study the Draft National Science, Technology and Innovation Policy (STIP) 2020 published by the Central Government.

Dr. Gangan Prathapan (Chairman)	Acting Director, CSIR – National Institute for Interdisciplinary Science and Technology (NIIST)
Dr. K. P. Sudheer	Executive Vice President, Kerala State Council for Science Technology and Environment
Prof. Jayakrishnan	Former Vice chancellor, University of Kerala
Prof. R.V.G. Menon	Former Principal, College of Engineering
Prof. Rajashree M.S	Vice Chancellor, A P J Abdul Kalam Technological University

Terms of Reference

1. To analyse the STIP 2020 from the point of view of science and technology education and research
2. To identify the clauses and provisions provided for in the policy document impacting higher education in terms of the approach and practices followed by the state.
3. To examine the implications in the context of autonomy, equity, access, and excellence
4. To study the consequences with respect to the centralisation move to ensure openness and accessibility to knowledge sources

The minutes were read and confirmed.

The Executive Body meeting came to an end by 12.40 pm.



Vice Chairman



Member Secretary