

GNLU

Research & Publication Division



Gujarat National Law University

Summary Report

of the Government of Gujarat Funded
Research Projects
(2017 - 2018)



Gujarat National Law University

Summary Report

of the Government of Gujarat Funded
Research Projects
(2017 - 2018)





ACKNOWLEDGMENTS

I am happy to present the Summary Report of the Government of Gujarat Funded Research Projects conducted by the faculty members of Gujarat National Law University during the year 2017-18. The Report provides brief information about the empirical research projects conducted by Principal Investigators along with Co-Investigators on several legal and inter disciplinary areas of contemporary relevance prevailing in the state of Gujarat. The report comprises of a short summary including the outcomes and suggestions recommended by the Researchers. The Editorial Board, which prepared this report, comprised of the following members:

1. **Prof. (Dr.) Ranita Nagar,**
Dean, Research & Publication Division and Professor of Economics
2. **Mr. Soaham Bajpai, Assistant Professor of Research**
3. **Mr. Shashibhushan Sharma, Assistant Professor of Research**
4. **Mr. Mradul Mishra, Assistant Professor of Research**
5. **Mr. Rahul B. Pandya, Administrative Assistant**

I express my deep appreciation for external experts from IIM, MICA etc who gave critical inputs for the research projects, principal investigators, the inhouse data analyst and the editorial team. The report represents the highlights of the Research Projects funded by Government of Gujarat during the period 2017- 2018.

Prof. (Dr.) Bimal N. Patel
Director, GNLU

ABOUT GUJARAT NATIONAL LAW UNIVERSITY

Gujarat National Law University (GNLU) is a statutory University established by the Government of Gujarat through Gujarat National Law University Act, 2003. GNLU is recognized by the Bar Council of India (BCI) and the University Grants Commission (UGC) [(2 (f) & 12 (b))].

The University was established with an aim to become a Research-based Teaching University, GNLU has always taken proactive initiatives and outlook to provide valuable and mutually beneficial services to the institution of governance, judiciary, economy and civil society, especially weaker sections of the society. GNLU has created a unique learning environment, emphasizing on research and training, coupled with solid grounding in theory, with a vision to address the user's requirement, whether academic or not. The university constantly strives to establish an all-round and interdisciplinary academic culture consistent with the other National Law Universities of the country by offering undergraduate, postgraduate and doctorate courses in the field of law.

GNLU offers interdisciplinary legal courses in five streams namely, B.A-LL.B, B.Com.-LL.B, B.Sc. -LL.B, BSW.-LL.B & BBA.-LL.B; two post-graduate programmes namely, LL.M and MBA (Financial Management and Business Laws) as well as doctoral programmes in law and inter-disciplinary fields and foreign law and languages programmes.

GNLU is a member of the Association of Indian Universities (AIU); the United Nations Academic Impact (UNAI); and International Association of Law Schools (IALS), Shastri Indo- Canadian Institute, among others.

OBJECTIVES

The GNLU Act 2003 proclaims objectives of that GNLU shall be “to advance and disseminate learning and knowledge of law and legal processes and their role in national development; to develop in the students and the research scholars sense of responsibility to serve society in the field of law by developing skills in regard to advocacy, legal service, legislation, parliamentary practice, law reforms and such other matters; to make law and legal processes efficient instruments of social development;- and to promote inter- disciplinary study of law in relation to management, technology, international cooperation and development.”

The ethos of imparting education in GNLU comprises a mutual endeavor of the faculty and the students who become part of our august family after clearing the hurdle of a rigorous and strenuous selection procedure, since only the cream of the country finds a place amidst us. The University has been in the process of striving for academic and professional excellence in the field of legal studies in the country. The University became functional from the year 2004. Our teaching methodology and the student response to it can be safely summarized as being par excellence. Our student fraternity has won us laurels in various spheres of national and international moot court competitions, paper presentations and various cultural activities. We strive for an all round and inter- disciplinary academic excellence in sync with other National Law Schools of the country.



ABOUT GNLU RESEARCH AND PUBLICATION DIVISION:

In furtherance of GNLU's initiative to excel as a research-based teaching university, the Research and Publications Division has been undertaking research activities with the aim to build and promote a solid foundational of research in law and inter-disciplinary fields. The research activities include undertaking policy-oriented research projects, publishing research outputs through various modes like books, articles, columns, blogs etc., promoting student interest groups through the Student Research Development Council and collaboration with national & international institutes and organizations etc. The Division further aims to generate interest and promote research activities among the faculty members and students; to ensure that the research activities of the Division carry forward the University objective to become a true research based teaching University; to develop consistent divisional research strategies; to deliver high quality research; to keep the faculty members and the students updated about the contemporary developments in law and inter-disciplinary fields; to develop interdisciplinary activities with other divisions of GNLU; and to promote, develop, manage and assess various Endowed Research Programmes run by the University. **GNLU Research projects and activities precisely aim to contribute meaningfully to various policy-making programs of the government and leading think-tanks contributing to the Development Agenda of the Nation.**

The Research Division is a full-fledged division consisting of Dean, Professors, Associate Professors, Assistant Professors, Research Associates, Teaching & Research Associates, dedicated data analyst and administrative staff.

OBJECTIVES:

- To develop Research Culture amongst the faculty members and students;
- To develop the scientific research in contemporary areas in law and interdisciplinary studies;
- To ensure that the research activities of the Division carry forward the University's objective to become a Research-based Teaching University;
- To work in close proximity with the endowment agencies, policymakers, government departments and private and public sector;
- To promote, develop, manage and assess various endowed research programmes run by the University.

PREFACE

The Gujarat National Law University (GNLU) has always taken proactive initiatives and outlook to provide valuable and mutually beneficial services to various stakeholders in the society. In pursuance of the same, GNLU had conducted sixteen research projects under the kind grant received from the Government of Gujarat for the year 2017- 18.

These research projects are an interesting blend of avenues that require further exploration through policy interventions as well as contemporary issues that require further attention. The objectives of these research projects are to identify and bring to the forefront the lacunae in the existing regulatory as well as social structures and thereafter suggest ways to bridge the gap. At the same time the research projects also delve into niche areas that require in depth study and analysis to attain optimum utilization of the country's resources.

The Government of Gujarat funded research projects were selected on the basis of the several research proposals received from the interested faculty members. The scrutiny committee had selected sixteen research projects based on the contemporary legal and inter disciplinary issues prevailing in the state of Gujarat. Further, the Research Assessment and Review Committee (RARC) was constituted to examine the progress of the allotted projects. RARC comprises of three external members namely Prof. N. K. Pathak, Former Director, School of Law, Gujarat University; Prof. Rasananda Panda, Professor & Area Leader - Business Management, Mudra Institute of Communications; and Prof. Somdeb Lahiri, Professor, School of Petroleum Management, Pandit Deendayal Petroleum University. The Principal Investigators and Co-Investigators presented the progress of their Research Projects before the hon'ble committee and on the basis of presentation and submitted progress report, the committee assessed and evaluated the submissions, including the quality of research and further guided researchers on potential reach, significance of research impacts and several other criterias. This rigorous process was continued till the completion of project.

Once the research projects work concluded, GNLU Research & Publication Division organized a Forum on “GoG funded GNLU Projects: Research Outputs 2018” on 9th May 2018 to showcase and deliberate on the outputs and outcomes of the current Government of Gujarat funded Research Projects undertaken by Gujarat National Law University. The forum explored the opportunities to promote the dissemination and utilization of the interdisciplinary research findings, supported by primary data and tested through statistical methods, in presence of Shri Bhupendrasinh Chudasama, Hon'ble Minister of Education (Primary, Secondary and Adult), Higher and Technical Education, Law and Justice, Government of Gujarat, RARC members and other dignitaries invited from several departments of Government of Gujarat. Hon'ble Minister instructed the researchers to share their final report with respective departments of Government of Gujarat to strengthen the knowledge base that the government and its

departments use in decision making, knowledge-based policy and overall strategic insights. Interesting insights were shared by invited and nominated participants from various Government of Gujarat departments advising researchers in developing a strategy to put knowledge into practice.

Gujarat National Law University expressed its sincere gratitude to the Government of Gujarat and its various departments for their encouragement and support to this collaboration between government and academia. The research projects will definitely explore the avenues through policy interventions on the contemporary issues. The complete research project report will be shortly submitted to the concerned departments of Government of Gujarat.



TABLE OF CONTENTS

Acknowledgements.....	I
About Gujarat National Law University.....	II
About GNLU Research and Publication Division	IV
Preface.....	V

1. Assessment of Statutory Frameworks of Tribunals in India

Principal Investigator: Prof. (Dr.) Bimal N. Patel, Director & Professor of International Law, GNLU

Co- Investigator: Dr. Jagadeesh Chandra T. G., Assistant Professor of Law, GNLU

Co- Investigator: Dr. Kalpeshkumar L. Gupta, Assistant Professor of Research, GNLU

01- 03

2. Project on Sensitizing and Creating IP Awareness among Academicians

Principal Investigator: Dr. Akil Ali Saiyed, Associate Professor of Research, GNLU

Co- Investigator: Mr. Soaham Bajpai, Assistant Professor of Research, GNLU

04- 05

3. The Role of Social Entrepreneurship in Promotion of Inclusive Development : A Case Study of Selected Organizations in Central Gujarat

Principal Investigator: Dr. Ambati Nageshwar Rao, Assistant Professor of Social Work, GNLU

06 - 07

4. Climate Smart Agriculture Addressing of Food Security and Climate Change

Principal Investigator: Dr. Viralkumar B Mandalya, Assistant Professor of Research, GNLU

Co- Investigator: Dr. Kirankumar G. Patel, Assistant Professor, Changa University, Changa

08 - 09

5. Harnessing Biodiversity and Nutrition by Postharvest Management of Fruits and Vegetables

Principal Investigator: Dr. Saira Gori, Assistant Professor of Law, GNLU

Co- Investigator: Dr. Anjali Bishnoi, Associate Professor, Shroff S R Rotary Institute of Chemical Technology, Vataria, Ankelshwar, Bharuch

10 - 12

6. Mapping the Foreign Relations of Ancient Gujarat: A Legal, Political and Economic Analysis

Principal Investigator: Dr. William Nunes, Associate Professor of Political Science, GNLU

13

7. A Study on Sports Governance and Policy in India: Current Issues and Challenges

Principal Investigator: Dr. Richa Mulchandani, Assistant Professor of History, GNLU

Co- Investigator: Mr. Tarun, Teaching and Research Associate, GNLU

14 - 15

8. Primary Care Takers and Inter-parental Cross-border Child Custody Disputes- Should India Sign Convention on Civil Aspects of International Child Abduction 1980?

Principal Investigator: Ms. Harsha Rajwansi, Assistant Professor of Law, GNLU

Co- Investigator: Mr. Soham Bajpai, Assistant Professor of Research, GNLU

16 - 17

9. Digital Financial Literacy through Digital India: Study of its Impact in the Rural Areas of Three Districts of Gujarat

Principal Investigator: Ms. Garima Goswami, Assistant Professor of Law, GNLU

Co- Investigator: Ms. Anu Mishra, Teaching and Research Associate, GNLU

18 - 20

10. The Study of State Practices on Benefit Sharing under United Nations Convention on the Law of the Sea

Principal Investigator: Prof. (Dr.) Bimal N. Patel, Director & Professor of International Law, GNLU

Co- Investigator: Mrs. Prabhavati Baskey, Assistant Professor of Law, GNLU

21 - 22

11. Factors Affecting Entrepreneurial Inclination among Undergraduate Students in Ahmedabad and Gandhinagar Cities

Principal Investigator: Dr. Viral Pandya, Associate Professor of Management, GNLU

Co- Investigator: Mr. Satya Ranjan Mishra, Assistant Professor of Commerce, GNLU

23 - 24

12. Confronting the Security Challenges and Enhancing the Effectiveness of Criminal Justice System

Principal Investigator: Dr. Saira Gori, Assistant Professor of Law, GNLU

25 - 27

13. The Key Developments in Biotechnology and its Impact on the Society, and Creation of Techno-legal Awareness towards the Recent Trends in Biotechnology

Principal Investigator: Dr. Anjani Singh Tomar, Associate Professor of Law, GNLU

Co- Investigator: Dr. Bindu Vijay, Assistant Professor of Science & Technology, GNLU

Co- Investigator: Dr. Viralkumar B. Mandalya, Assistant Professor of Research, GNLU

28 - 30

14. Creation of Compendium on Legal Education Institutes (LEI) for the Rejuvenation of Legal Education in the State of Gujarat

Principal Investigator: Dr. Akil Ali Saiyed, Associate Professor of Research, GNLU

Co- Investigator: Dr. Kalpeshkumar L. Gupta, Assistant Professor of Research, GNLU

31 - 32

15. Study on the Importance of Police Accountability and its Impact on the Governance of Criminal Justice System in the State of Gujarat

Principal Investigator: Dr. Akil Ali Saiyed, Associate Professor of Research, GNLU

Co- Investigator: Mr. Mradul Mishra, Assistant Professor of Research, GNLU

33 - 34

Aims/Objectives:

- To study the statutory framework and functioning of various Tribunals and other quasi-judicial bodies in India,
- To evaluate the appeal and review provisions in the respective parent Acts wherein Tribunals have been established,
- To assess the impact of Tribunalisation on the functioning of the Supreme Court,
- To find the factors that contribute the delay in disposal cases by the Tribunals,
- To study and collect the opinions from the professionals on the feasibility of appointing advocates / academicians / others as Chairperson or members of the Tribunal,
- To study the implications on functioning of the Tribunals due to changes such as merger of certain Tribunals and appointment procedures effected through the Finance Act, 2017, and
- To suggest effective mechanisms for revamping of the entire Tribunalisation of Justice system in India.

Task Initiators:

- Principle Investigator: Prof. (Dr.) Bimal N. Patel, Director & Professor of International Law, Gujarat National Law University, Gandhinagar
- Co-Investigator: Dr. Jagadeesh Chandra T.G., Assistant Professor of Law, Gujarat National Law University, Gandhinagar
- Co-Investigator: Dr. Kalpeshkumar L Gupta, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

As on 15 November 2017, 416,333 cases are pending in 20 Tribunals. In addition to the problem of backlog of cases, inherent institutional issues such as uniformity of rules, appointments, funding, infrastructure issues needs to be addressed. Desperate with the state of affairs, the parliament enacted the Finance Act, 2017 merging eight Tribunals and introduced rules pertaining to selection, age, and term of Chairperson/members of the Tribunals. This reformative measures has been challenged before the Supreme Court and subjected for judicial scrutiny and efficacy. While the matter was pending before the Supreme Court, this research was carried out.

This Report examines the statutory provisions and the evaluation of the functioning of various Tribunals in India by adopting a doctrinal as well as empirical research methodology. The empirical research has been carried out through an empirical tools such as questionnaire and observation methods. During the field study, the researchers interacted with the advocates, who were primarily practicing in Tribunals in New Delhi. The data has been collected only from the Tribunals located in New Delhi. Out of 19 Tribunals, two Tribunals such as Intellectual Property Appellate Tribunal and Airport Appellate Tribunal were apparently non-functioning due to non-appointment of Chairpersons/members, therefore, excluded from the research. The Report is based on 495 samples collected from 17 Tribunals and used 477 samples for analysis. The responses from the respondents for each question are considered for analysis and recommended only if more than 50% of respondents had given their answer as 'yes'. The study is based on the empirical research with a view to elucidate the opinions on problems existing in the working of Tribunals and also to consider fresh ideas for complete revamping of the Tribunalisation of Justice system in India.

Outcome:

This Report is mainly based on empirical research and makes recommendations on the basis of first-hand experience of nearly 500 counsels and advocates practicing before the Tribunals in New Delhi. As per the empirical survey results, 411 (86%) are in favour of continuing the existing composition of the Tribunals. 410 (86%) consider that the procedures are adequate for effective administration of justice. 342 (72%) agree that the workload of Tribunals have increased due to various reforms. 325 (68%) consider that substantive and procedural provisions stipulated in respective Acts are adequate. 404 (85%) consider that the Tribunals are adopting similar approach in consistent way for similar purposes. 359 (75%) consider that the information on the website is available. 178 (37%) believe that the Tribunals compromise in delivering quality of justice due to departing from normal Courts procedures. 401 (84%) agree that the appointment procedures should be made uniform and standardized. 223 (47%) suggest in favour of granting the Tribunals status equivalent to District Courts. 329 (69%) are in favour of discontinuing the practice of appointing retired Supreme Court and High Court judges as Chairperson and members of the Tribunals. 323 (68%) are in favour of making appointments through all India Judicial Services examination. 223 (47%) suggest in favour of appointing jurists, academicians and eminent persons as Chairpersons and members. 236 (49%) have favoured merger of Tribunals effected through the Finance Act, 2017. 136 (28%) agree to discontinue the Tribunals and replace them with the regular Court system. A clear and categorical conclusion emerges that the Tribunal system is working well and delivering the goals and objectives and yet at the same time, a continuous injunction of reforms in terms of appointments, procedures, infrastructure, delivered by the executive can indeed meet the expectations of the stakeholders and the justice system as a whole. Some of the fundamental

concerns expressed by the practitioners are already addressed in the Finance Act, 2017 and there is further scope of reforms based on this Report. It is therefore expected that the implementation of the reforms introduced in the Finance Act, 2017 will further augment the efficacy and efficiency of the role and responsibilities of the Tribunals in the overall justice system of the Country.

Status: Completed

Project completed and the report has been submitted in the year, 2017

End Recipients:

Ministry of Law & Justice, Government of India, Law Commission of India, Ministry of Law & Justice, Government of India, Ministry of Law & Justice, Government of Gujarat, All the Tribunals located at New Delhi

Possible Expansion of the Project:

The empirical data has been collected from the respondents who are practicing in various Tribunals located at New Delhi. This empirical research may also be extended and can collect the data from the Tribunals, which are located in other metropolitan cities in India.



2

Project on Sensitizing and Creating IP Awareness among Academicians within the State of Gujarat

Aims/Objectives:

- To determine the standard of preliminary information of the Intellectual Property Rights among the academicians.
- To sensitize the academicians of various faculty of higher education institutions about the concept of Intellectual Property Rights.
- To motivate the faculty members of universities and colleges for research and innovation through sensitizing and creating IP awareness among them.

Task Initiators:

- Principal Investigator: Dr. Akil Ali Saiyed, Associate Professor of Research, Gujarat National Law University, Gandhinagar
- Co-investigator: Mr. Soham Bajpai, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

The research method is mainly empirical in nature with the doctrinal study for the identification of the parameters. Since, the study is limited to the State of Gujarat, the survey was conducted in different universities and colleges of the State of Gujarat. A stratified sampling is made with the confidence level of 95 % and 99% with the appropriate confidence interval for each strata.

A questionnaire was sent to the faculty members of identified universities and colleges. In total, 220 responses were received. The responses were analyzed statistically and reported.

Outcome:

- There is no significance difference in the level of IP awareness among the academicians of different faculty.
- The level of awareness is better in case of pharmacy and science faculty and is lowest among the agriculture faculty.
- There is no significance difference in the level of IP awareness among the academicians of different qualifications. However, it was observed that the awareness level was better among the academicians who have completed their Ph.D.

- It was found that special course/program on IP would accelerate the research activity in higher educational institutions.
- It was also found that many of the universities did not lay any policy on IP.
- Teaching of IP in regular curriculum is highly desirable.

Suggestions:

- IP sensitization and awareness program should be conducted at every higher educational institutions / universities.
- A well designed IP policy should be drafted for each University.
- Every university should establish an IP facilitation center.
- IP curriculum should be offered to the students of every faculty and branch of specialization.
- Tailor made certificate/diploma courses should be offered as add-on at graduation level.

Status: Completed

End Recipients:

Ministry of Human Resource Development, Department of Science and Technology, Department of Electronics and Information Technology, Department of Industrial Policy and Promotion, Gujarat Council for Science and Technology.

Possible Expansion of the Project:

The study has been conducted only in the state of Gujarat. The same study can be conducted in other states as well and by doing that the recognition and protection of intellectual properties can be assured.



3

The Role of Social Entrepreneurship in Promotion of Inclusive Development: A Case Study of Selected Organizations in Central Gujarat

Aims/Objectives:

- The main objective of this study was to examine the characteristics of social enterprises and analyze the motivational factors that have influenced the social entrepreneurs to start their own social enterprises and to study and evaluate the journey of social entrepreneurs in contribution towards inclusive development.

Task Initiators:

- Dr. Ambati Nageshwar Rao, Assistant Professor of Social Work, Gujarat National Law University, Gandhinagar.

Details of the Activity:

For this study, the researcher has collected data in two phases. In the first phase, the researcher used survey method to collect data from 50 social enterprises located in Central Gujarat by using snow ball sampling. Similarly, in the second phase, the researcher collected data from 4 social enterprises by using interview method. Further, the source of information is based on primary data as well as secondary data sources. For the data analysis, the quantitative data has been coded and entered into the Statistical Package for Social Sciences (SPSS) for statistical analysis and descriptive statistics has been used.

Outcome:

- The results of the study indicate that a majority of social entrepreneurs (70 %) comprised of those who were between the age of 21–40 years and the rest 30 percent who were between the age of 41-60 years. Similarly, gender wise 58 % of the respondents were males, while females represented only 42 %.
- Further, the study indicates that most of the respondents(80 %) established their social enterprise in the last 07 years only (i.e., after 2011 year onwards)
- The social entrepreneurs faced access to adequate capital (72 %), scaling social venture (66 %), marketing linkages (60 %), and dilatory and cumbersome regulatory practices (58 %) as their biggest challenges in operating their venture and achieving success.
- Other challenges reported by respondents were lack of skilled human resources (56%), lack

of legal knowledge about legal aspects (48 %), Lack of entrepreneur skills (36 %) and monitoring and regulation of organizations (24 %)

- Patent rights knowledge and applying modern technology on the other hand at 42 % respectively appear to be the major threat for the respondents to carry out their activities.

Suggestions:

Based on the results and findings of the study, the researcher suggested following measures:

- Higher education institutions in India should include social entrepreneurship as an academic course of specialized study.
- Training and development for social venture helps in confidence building, management and leadership skills.
- Incubation support and training is needed for social networking and resource mobilization for growth and development of social enterprises. Thus, higher education institutions have a major role to play in promoting social entrepreneurship as a way of solving social, economic and environmental problems.
- Government should take initiatives to tap the potential solutions offered by these social entrepreneurs by creating enabling environment, recognizing their products and services, rewarding their performance and helping them to expand their ventures in different areas to reach more number of beneficiaries.
- Government should take the responsibility to reach the people and also provide support in the form of financial support, creating entrepreneurial eco-system; create a platform to showcase their ideas.

Status: Completed

End Recipients:

Labour and Employment Department of Government of Gujarat, Industry and Mines
Department of Government of Gujarat

Possible Expansion of the Project:

Since the present research has been conducted in selected organizations, there is possibility of the further research in more organizations which can give a better idea of the subject.

Aims/Objectives:

- To analyze farmer's utilization of climate smart technology in the State of Gujarat
- To develop eco-friendly solutions that may contribute to high plant performance under different environmental conditions.

Task Initiators:

- Principal Investigator: Dr. Viralkumar B. Mandaliya, Assistant Professor of Research, Gujarat National Law University.
- Co-Investigator: Dr. Kirankumar G. Patel, Assistant Professor, CHARUSAT, Changa

Details of the Activity:

The purpose of this project is to highlight that food security and climate change are closely linked in the agriculture sector, and the key opportunities exist to transform the sector towards climate-smart systems. The empirical and lab based research work was taken based on the Section 31 and Schedule III of the National Food Security Act, 2013 highlighting the status of the farmers in the State of Gujarat and to develop the biocontrol agent to help out the farmers. The project was comprised of two major components. The questionnaire based survey of farmers in five different zone of Gujarat State was carried out and analyzed based on SPSS platform. Lab based experimentation done at partnering institute, CHARUSAT, Changa and the mass cultivation studies of *Trichoderma* strains were performed.

Outcome:

- There is an impact of mobile technology on utilization of agriculture technology. If more number of mobile app will be prepared especially addressing the zone-wise need of farmers then it will strengthen more farmers. Thus, development of mobile app on Climate Smart Technologies is recommended.
- It was found that utilization of agriculture technology & knowledge of Government Schemes were dependent on media technology. Nowadays, farmers are watching the TV programmes mainly on paid TV. Thus, it is recommended that there should be

advertisement on various agriculture technologies and Government Schemes on paid TV channels.

- It is important to understand the problems associated to farmers that may be limiting factor for growth of agriculture sector at large. Thus, it is recommended to develop a platform at district level where farmers can register their problems.
- Lower Market Price of Agricultural Product is prime problem faced by the farmers. It is recommended that government agencies should take measure to address this problem
- The selected *Trichoderma* strains have shown significant antagonism activity against cumin and wheat fungal pathogens. It is recommended that the *Trichoderma* strains should be tested for antagonism activity against various fungal pathogens.
- The selected *Trichoderma* strains have shown better growth and plant yield in sugarcane waste and sorghum and found stable when blended with the Talc and bentonite clay. It is recommended that the *Trichoderma* strains should be tested for its potential at various zones of the State of Gujarat.

Status: Completed

End Recipients:

Climate Change Department, Government of Gujarat; Agriculture, Co-operation and Farmer Welfare Department, Government of Gujarat; Government research establishments such as CSIR (Council of Scientific and Industrial Research), ICAR (Indian Council of Agricultural Research) laboratories, Science and Agricultural Students, Academicians, Researcher, and Policy makers.

Possible Expansion of the Project:

The questionnaire based survey of farmers may be performed in more districts to understand the status of utilization of climate smart technology by farmers in the State of Gujarat.



5

Harnessing Biodiversity and Nutrition by Postharvest Management of Fruits and Vegetables

Aims/Objectives:

- To study the component of sustainable agriculture which is a core part of the concept of sustainable development;
- To study legal regulatory framework for postharvest management and food safety;
- To set the standards for different sensory, chemical and biochemical parameters for fruit and vegetable quality assessment and to test these parameters on various different species of fruits and vegetables;
- To identify the measures to reduce losses between harvest and consumption;
- Isolation and characterization of different microbial strains, causing fruit and vegetable spoilage.

Task Initiators:

- Principal Investigator: Dr. Saira Gori, Assistant Professor of Law and Dean, Training Division, Gujarat National Law University
- Co-Investigator: Dr. Anjali Bishnoi, Head, Associate Professor (Department of Polymer & Rubber Technology & Department of Glass & Ceramic Technology) Shroff S R Rotary Institute of Chemical Technology, Vataria, Ankelshwar, Bharuch.

Details of the Activity:

In this proposed research, the researcher tried to address the following questions

- First, what examples do we have of specific postharvest physiological or biochemical traits that have been used to improve crops and more specifically, to improve the environmental sustainability of the agricultural production system?
- Second, what have been the real effects of these advances on agricultural sustainability?
- Third, how can researcher's best make postharvest of crops research relevant to the challenge of environmental sustainability?
- Finally, how can producers use these postharvest technological advances in a viable and sustainable manner to improve their productivity and profitability?

Outcome:

- This research through lab experiment tried to provide new coating material which helps in extending the shelf life of fruits and vegetables, without glossing the surface artificially, providing an alternative to wax based coatings. Hence, the researcher has evaluated quality of fruits and vegetables and choose the best sensory, chemical and biochemical parameters which determine quality and freshness of fruits and vegetables.
- Solutions were prepared from high viscosity chitin and chitosan flakes (From shrimp shells, HIMEDIA) by slurring the flakes in water (Respective parentages). The slurry was combined with an equal volume of malic acid solution and the dispersed with a shaking condition overnight. The dispersion were heated to 60°C with stirring, and filtered through filter paper to remove a small amount of the insoluble materials. The detailed analysis of sample treatment and coating material and their effect is discussed and projected in the draft report.
- Effective management during the postharvest period, rather than the level of sophistication of any given technology, is the key in reaching the desired objectives. While large scale operations may benefit from investing in costly handling machinery and high-tech postharvest treatments, often these options are not practical for small scale handlers. Instead, simple, low cost technologies often can be more appropriate for small volume, limited resource commercial operations, farmers involved in direct marketing, as well as for suppliers to exporters in developing countries.
- The use of postharvest pesticides may reduce the incidence of surface defects but can be costly both in terms of money and environmental consequences.
- There are many interacting steps involved in any postharvest system. While particular practices and the sequence of operations will vary for each crop, there is a general series of steps in postharvest handling systems that was followed for the purposes of the research.

Suggestions:

- The food grains that are provided to the beneficiaries of the National Food Security Act, 2013 (herein after referred as Act) at the concessional rate i.e. 5 kg/month should be at least increased to the quantity of 10 kg/month.
- As every human body is in the need of a proper balanced diet, the government should also make amendment to the provisions of the Act and include the list of other food grains such as moong, chana, rajma and other fruits and vegetables that will be sold to the poor and needy people at the concessional rate through fair price shops.
- The legislators should also make an amendment to the Act and insert the provision of establishing the government run eateries in every city so that a homeless, migrant or destitute and starving individual can visit and eat the food.

- The punishments provided under the Act for the contravention of any of the provisions of the Act by any of the official servant who is duty bound to make proper execution of the provisions of the Act must be increased and apart from the penalty for contravention of provisions, the Act must also impose the imprisonment term upon any person who is found guilty of corrupt practices carried on while executing the provisions of this Act.
- Food Corporation of India in consultation with various wings of the Government must fix the norms of establishing the ware house or storage facilities for the food grains and other eatables so that such food grains and other eatables don't get spoilt in any adverse weather conditions.
- Enactment at state level : Chhattisgarh Food Security Act has witnessed a great success after its enactment and therefore the Union Government must study the provisions related to implementation of Chhattisgarh Food Security Act and must identify the beneficiaries of the Act by adopting the mechanism that has been provided under the Chhattisgarh Food Security Act.

Status: Completed

End Recipients:

Ministry of Environment, Forest & Climate Change, Food Safety and Standards Authority of India (FSSAI), Ministry of Agriculture, Government of Gujarat, BARC –Research & Development (Health, Food& Agriculture)

Possible Expansion of the Project:

The present study is a first tier research study wherein for the next phase research, the researcher would like to deliberate and carry out State-wise comparative intensive research on above area. Further, the researcher would like to carry out lab experiment to the next level covering all seasonal fruits and vegetable to provide new coating material which helps in extending the shelf life of fruits and vegetables, without glossing the surface artificially, providing an alternative to wax based coatings by opting the best sensory, chemical and biochemical parameters which determine quality and freshness of fruits and vegetables.

6

Mapping the Ancient Maritime Foreign Relations of Gujarat: A Legal, Political and Economic Analysis

“MAPPING THE ANCIENT MARITIME FOREIGN RELATION OF GUJARAT: A LEGAL, POLITICAL AND ECONOMIC ANALYSIS OF SURAT”

Objectives:

- To document and analyze the legal arrangements/contract/ provision under the which the states traded;
- To analyze and document the policies envisaged by the state in term of its relations to foreign nations;
- To analyze and document the economic policies and the progress of the state in the light of the maritime trade;
- To deduce and analyze the strategic importance of all elements and their inter-relations in the maritime and international trade environment. Also to identify the aspects driving change and factors that led to effective decision making and policy.

Task Initiators:

- Principal Investigator: Dr William Nunes, Associate Professor of Political Science, Gujarat National Law University, Gandhinagar.

Details of the Activity:

The present study has mapped the maritime trade of India in general and Gujarat in particular. It further tries to see the importance of Gujarat Maritime activities especially trade during the various period. The third chapter provides a brief history of Surat and its maritime activities. It then attempts to study and analyzed the social, economic and political context of the importance of Surat as a port from the time period of its operation, viz., Mughals, Peshwas, European Companies. The researcher find that the development of ports in Gujarat could steer alternative route as well as economic growth. It also suggest that given the rich heritage that it possess development of tourist trails would boost tourism industry.

Outcome:

Help us understand the nature of foreign relation of India. Further given the importance of the maritime, the state, by understanding from the past, could take development policies that boost tourism industry and the economy.

Status: completed

End Recipients:

State Government, Tourism Department, Gujarat Maritime Board, Academicians.

Aims/Objectives:

- To study the power and functions of government body and sports federation.
- To study the revenue management of federations.
- To study tripartite relation between Ministry of Youth of Affairs and Sports, Indian Olympic Association and National Sports Federations.
- To study sponsorship opportunities for sports person.
- To study regulations related to equal opportunities without any discrimination on the basis of caste, creed, sex, or religion.
- To study doping management in national and international sports.
- To study the availability of sports infrastructure and its condition in India.

Task Initiators:

- Principal Investigator: Dr. Richa R. Mulchandani, Assistant Professor of History, Gujarat National Law University, Gandhinagar
- Co-Investigator: Mr. Tarun, Teaching and Research Associate, Gujarat National Law University, Gandhinagar

Details of the Activity:

The research is a detailed study of the sports governance structure of India covering almost all the issues and challenges faced by the Sports sector of India. It gives an exhaustive international comparative analysis by studying the sports governance structure of 14 countries around the globe. Through the report the researchers have tried to explore the pathologies in the sports administration and culture in India through various lens and propose necessary recommendations to curb the issues and challenges for upgrading the performance of Indian Athletes at various international sporting events especially the Olympics.

The research is doctrinal in nature and comprises of qualitative and quantitative method for data analysis. The method of research is also adopts diagnostic method by incorporating various leading cases and incidents (if possible) which necessitates to reorganize and restructure sports governance and policy in India. The researchers have classified data into two heads i.e. National and International. The data related to India has been collected through constitutional

provisions, various acts, bills and codes and sports policies, codes and schemes launched by the government. For the purpose of international data, judgment analysis method is used and 14 countries are taken and divided into three categories;

- Type A: This category consists of countries performing best as well as hosted Olympics since 1992 to 2016. The countries which qualified were USA, Australia, United Kingdom and China.
- Type B: This category consists of nations who have performed well and have a consistent medal tally since 1992 to 2016. Countries like Germany, France, Italy, Japan and Russia are under this category.
- Type C: This category consists of countries that have emerged in the Olympics since 1992 with exceptional performances in 2008 and 2016 Olympics. New Zealand, South Korea, Croatia, South Africa and Denmark comes under this category.

The time span taken to shortlist these countries is 25 years i.e. from 1992 to 2016.

Outcome:

- India shall come up with better legal framework with regards to dissemination of information as well as reporting of decision in sports.
- In India, sources of reasoned decision in sports is found in form of practice where as in other countries they are in form of legislation and regulations.
- The obstacles in revenue management was found as common problem in all countries including India. However, Type C countries have come with the provisions in this regard.
- With the growing sports culture, India needs to evolve provisions related to environmental concerns in sports. At the same time mass level understanding of health and fitness in the development of sports culture can brought into a clear Government Policy.
- The gender issues in sports requires special attention and India must make some provisions to deal with Issues related to trans-genders. This is also found as global issue where no specific legislative frame - work is available accept in some type A Countries.
- Comprehensively, adoption of sports law covering discretionary power, transparency in decision making, revenue management, sports infrastructure development, development of sports cultural and gender issues can support the sports eco system of India in much better and uniform manner.

Status: Completed

End Recipients:

Ministry of Youth and Sports Affairs, Sports, Youth and Cultural Activities Department, Government of Gujarat, National Sports Federations, Athletes and Coaches.

Aims/Objectives:

- To comprehensively review the cross-border child custody disputes and identify the legal protective measures provided to primary care takers by the Indian judiciary in such disputes.
- To facilitate the formulation and development of legal protective measures that adequately respond to the issues of primary care takers for the purpose of enactment of proposed Bill by Law Commission of India

Task Initiators:

- Principle Investigator- Ms. Harsha Rajwanshi, Assistant Professor of Law, Gujarat National Law University, Gandhinagar
- Co-Investigator- Mr. Soaham Bajpai, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

The question whether India should sign 1980 Convention on Civil Aspects of International Child Abduction (hereinafter referred as 1980 Hague Convention) has generated contentious debate. In the 218th Report titled “Need to accede to The Hague Convention on the Civil Aspects of International Child Abduction 1980”, Law Commission of India advised Government of India to accede 1980 Hague Convention. In 2016, the debate of signing the Convention again got intensified when Law Commission of India headed by Justice B.S Chauhan submitted its 263rd Report to Law minister Shri Ravi Shankar Prasad recommending the enactment of Protection of Children (Inter-Country Removal and Retention) Bill, 2016. The proposed Bill by Law Commission is an attempt to set the stage for India to ratify the 1980 Hague Convention.

As there is a need to comprehensively review the proposed Bill to ensure protection to the primary care takers/mothers in cross border child custody disputes, the focus of this research is theoretical and investigative analysis of Indian judicial pronouncements to identify and recommend the safeguards to primary care takers.

This research reviews the High Court cases and Supreme Court cases and draws statistical inferences in relation of gender dimension to the debated issue in inter-parental cross border

child custody disputes. The trends and patterns of judicial reasoning by Supreme Court cases vis-à-vis different legal principles applied in such cases are thoroughly analyzed. The co-relation to different legal principles to the outcome of the cases has been studied and analyzed.

Outcome:

On qualitatively aspect of research, the research observes that judicial reasoning of Supreme Court in cross border child custody is premised on 'Best Interest of Child' which is in conflict with the Hague Convention's principle of 'Best Interest of Child' whose interpretation is highly leaned towards the prompt return of child. There is divergence in interpretation of best interest doctrine as evidenced from the Indian judicial cases and the Hague Convention.

The research highlights that judicial responses in India have tried to bridge the income inequality gaps providing adequate safeguards to women upon the order of return of child to habitual residence. The proposed Bill by Law Commission of India addresses the problem of domestic violence but doesn't address the issue of gender income inequalities. The judicial responses in India are intended to protect women from criminal sanctions in jurisdiction upon order of return of child. However, the proposed Bill, on contrary, stipulates for criminal sanction against the abducting child which may be detrimental to the overall intents and purposes of the return of child.

The research also suggests that there is a subsequent need for specific custody laws or guidelines in India in case India intends to ratify Hague Convention.

Status: Completed

End Recipients:

Ministry of Women and Child Development, Government of India, Ministry of External Affairs, Government of India, Women & Child Development Department, Government of Gujarat, Gujarat State Non-Resident Gujaratis' Foundation, Government of Gujarat, NRI Associations, Academia.



Aims/Objectives:

- To understand the awareness amongst the selected sample regarding Digital India Mission;
- To understand the digital infrastructure available in the selected sample;
- To understand the level of digital financial literacy amongst the selected sample regarding digital financial services such as Immediate Payment Service (IMPS), Unified Payments Interface (UPI), Bank PoS machines etc.;
- To understand the awareness and functioning of Common Service Centres (CSC) in the selected sample;
- To study the impact of demonetization on the level of digital financial literacy of the selected sample.

Task Initiators:

- Principal Investigator: Ms. Garima Goswami, Assistant Professor of Law, Gujarat National Law University, Gandhinagar
- Co-Investigator: Ms. Anu Mishra, Assistant Professor of Law, Kirit P. Mehta School of Law, NMIMS, Mumbai

Details of the Activity:

Digital financial literacy means to effectively use digital devices for financial transactions. It demands smaller infrastructure, economic, all time availability. However, along with this, security of individual becomes a primary consideration. In our country there is a general lack of awareness with regards to digital financial literacy. Majority of the transactions are done through the preferred offline mode of cash. The proportion of online transactions is quiet low. To cure this, there have been various initiatives by the government at both central and state level to promote the digital mode of financial transactions. The Digital India Mission is one of the most landmark and remarkable initiatives in this regard. However, what is important to understand is that such reforms are being evident majorly in the urban areas in comparison to the rural areas. It was therefore, pertinent to study that how is the rural society coping with this transformation of Indian economy and society.

In view of above backdrop the current study was focused on the rural areas of the state of Gujarat. Three districts from the state were selected namely Ahmedabad, Surat and Gandhinagar. One village from each district was selected through random sampling namely Aslali, Olpad and Dabhoda respectively. A questionnaire was prepared which revolved around various parameters to ascertain the level of digital financial literacy of the sample and allied issues.

Outcome:

- There was a pervasive lack of awareness, availability of digital infrastructure, level of digital financial literacy along with the functioning of the Common Service Centre in all the three villages.
- The dominant mode of financial transaction of more than an average of 92% of the sample population was through offline transactions.
- There were a large number of respondents who were unaware of even the existence of CSC in their village.
- Only around 20% of the respondents used IMPS or Paytm to make transactions post demonetization in Olpad. Whereas for Aslali, the data suggests that the people have started using ATM cards and other modes of digital payment in their routine life post demonetization. The number was comparatively higher for Dabhoda. Many people have started using ATM cards, mobile transfer, Paytm and other modes of digital payment.
- The awareness and accessibility about Digital India Mission was comparatively more prevalent amongst the male population as opposed to the female population and so male respondents comparatively use and access digital modes of payment more than the female respondents.
- Majority of the respondents had a positive approach towards shifting to digital ways and preferring them over offline methods in the near future.

Suggestions:

- There exists a need of more awareness programs, which may include workshops, seminars, and financial management courses to make women more adept to the emerging financial services.
- The government may form a team of women in areas which lack financial literacy; so that awareness can be spread. The banks must do the communication through vernacular/local language, which may help women to understand the concepts.
- The government also needs to bring in more awareness programmes through financial literacy campaigns wherein the people in the rural areas can be taught about the usage and benefits of digital mode of payments.

- In order to incorporate financial inclusion into the social fabric of India, attempts at expanding the outreach of financial literacy needs to start at the grass-roots. An important method to do this would be inclusion of Financial Literacy in school curriculum. When children become aware of the concept, they can influence their families on the importance of savings and take necessary steps for the better management of money.
- In order to boost up the effectiveness, of the usage of the financial products and services and to enhance the financial system of the nation, it is suggested that more capital infusion towards financial literacy workshops, seminars at the school, college, workplaces and the residential areas should be done.

Status: Completed

End Recipients:

The Ministry of Electronics and Information Technology, Government of India, Education Department of Government of Gujarat, Department of Science & Technology (DST), Government of Gujarat, Office of The Collector & District Magistrate, of the three districts, Panchayats, Rural Housing and Rural Development Department, Government of Gujarat

Possible Expansion of the Project:

The researchers are planning to further expand the research study to four more districts of Gujarat namely, Vadodara, Rajkot, Junagadh and Bhavnagar.



Aims/Objectives:

- To study and analyze the regime of benefit-sharing under the UNCLOS
- To analyze concept of benefit sharing vis-a- vis national interests
- To analyze the rights and duties of the states and study of the state's practices regime under UNCLOS on benefit sharing.
- To analyze the policies and practices of the state under UNCLOS towards the other states.
- To study the policy works required to ensure the new scientific and technological advances into ocean governance and environmentally sustainable.
- To identify the aspects driving change and factors that led to effective decision making and policy of the states.

Task Initiators:

- Principal Investigator: Prof. (Dr.) Bimal N Patel, Director & Professor of Public International Law, Gujarat National Law University
- Co-Investigator: Mrs. Prabhavati Baskey, Assistant Professor of Law, Gujarat National Law University

Details of the Activity:

UNCLOS lays down one of the most important goals, namely, the benefits sharing from the exploitation of mineral resources of the deep seabed between developed and developing countries. Part XI of the Convention deals with the concept of innovative concept of the common heritage of mankind, i.e. benefits sharing from the exploitation of mineral resources of the deep seabed with developing countries.

An in-depth research is required to understand the legal and policy perspectives. It may include focus on marine biotechnology and distribution of marine species. Another important question is access and benefit sharing in the marine realm – how to strike a balance between sovereign rights and the common heritage of mankind, what are the sovereign rights over genetic resources, which international instruments govern marine genetic research activities, what are the important state practices or national regimes on management of marine genetic resources.

Furthermore, a set of research questions such as what is the concept of injustice in the field of benefit sharing under UNCLOS, what are the fundamental ineffectiveness and how research and developments are currently hampered?

Marine genetic resources (MGRs) from areas beyond national jurisdiction are currently the focus of great attention in the grounds of both science and international law. Scientists are concerned to the enormous prospective of this mostly untapped resource, notably for uses in the medical and pharmaceutical industries. Not surprisingly, the potential of these resources has also attracted much attention from the international and legal spheres with respect to the intellectual property protections that can be afforded to discoveries and inventions stemming from MGRs in areas beyond national jurisdiction. The value of these MGRs lies in their genetic material, particularly in the genetic variability of the material in question. Those variations codify the particular adaptations of every living organism. The genetic material, which makes them different, is also the genetic material that can be most useful. The value of these MGRs lies in their genetic material.

Outcome:

The observations and recommendations of the research project would be extremely useful to State Government, Central Government, policy-making authorities, especially ocean administration institutions of the nations, international organizations, international courts and tribunals, research institutions and private and commercial stakeholders.

Status: Completed

End Recipients:

State government, Central government, Policy Maker, National and International organizations, Academicians and students

Possible Expansion of the Project:

There is a possibility of conducting a non-doctrinal research in this area to understand the full dimension of the probable cause and the legal means to implement the access to benefit sharing of marine genetic resources. There is a possibility, of converting this research into a book publication as there is no Indian authored book on this topic of access to benefit sharing in areas beyond national jurisdiction.

Aims/Objectives:

To study and examine the impact of following factors affecting students towards their inclination for entrepreneurship:

- Personal, social and economic factors
- Family background & parental support
- Role models
- Entrepreneurship curriculum
- Seed money
- Incubation centers
- University and faculty members

Task Initiators:

- Principal Investigator: Dr. Viral M. Pandya, Associate Professor of Management, Gujarat National Law University, Gandhinagar
- Co-Investigator: Mr. Satya Ranjan Mishra, Assistant Professor of Commerce, Gujarat National Law University, Gandhinagar

Details of the Activity:

Presently, in India, more than half of the population is within the age group of 15 to 59 years, known as the economically active age group. It is projected that every year around 6 to 8 million youth will enter the labour force for coming ten years. However, on the supply side, there are not these many jobs being created. This indicates that there is a pressing need to effectively implement the system which can absorb the youth in profession.

Promoting entrepreneurship in society is one well accepted mechanism to generate employment which has potential to cater to the said problem. However, there are various factors which affect the inclination of youth towards self-employment. Study of these factors helped to understand the perspective of youth towards entrepreneurship.

The research focused on various demographic and non-demographic factors affecting youth towards entrepreneurship like age, gender, family income, entrepreneurship course, entrepreneurship related activities at university level, etc. The study focused on the undergraduate students (sample size of 491) mainly from Ahmedabad and Gandhinagar based universities and colleges.

Outcome:

The research undertaken measured the effects of various factors like age, gender, family income, entrepreneurship course, entrepreneurship related activities at university level, parents' encouragement and role models from business community etc. towards students' inclination to opt for entrepreneurship. The study indicates that one's gender does not affect the decision to go for entrepreneurship. Hence, both boys and girls have equal possibility to opt for entrepreneurship. Further, strong relationship has been found of business role model's influence as motivating factor towards starting own business. Whereas factors like family income, age, parent's encouragement etc. have not shown much influence on opting entrepreneurship as career for youth.

Based on the findings of the study and learning lessons from other countries, the study provides recommendations for universities and policy makers to boost the spirit of entrepreneurship among youth.

Status: Completed

End Recipients:

State Education Department of Gujarat, Universities and Academic Institutes, Niti Aayog & Atal Innovation Mission



Aims/Objectives:

- To create well-informed citizens and professionals in the area of criminal justice system;
- To enhance the competencies of the professionals already working in the area of criminal justice system;
- To create a forum for free and frank discussions and dissemination of new ideas and innovations in matters concerning management of Internal Security;
- To identify the emerging threats of Internal Security at National/International level;
- To study the internal and external environments in which the Police Forces function;
- To ensure that the government agencies/ enforcement agencies, etc., keep pace with emerging developments in criminal justice;
- The research tried to analyze the increasing role of forensic science in smooth lining the investigation procedures in criminal matters, terrorist activities, etc;
- The research aims at equipping the security agencies so that they demonstrate originality in the appreciation of the problems and application of knowledge together with a practical understanding of how established research techniques are used to create and interpret knowledge.

Task Initiators:

- Principal Investigator: Dr. Saira Gori, Assistant Professor of Law and Dean, Training Division, Gujarat National Law University, Gandhinagar

Details of the Activity:

The present research is doctrinal in nature wherein the researcher identified high priority research development in the following areas:

- Law enforcement equipment and technology
- Law enforcement investigations with reference to sexual assault cases and acquittal and conviction ratio in criminal cases
- Police agency administration and performance
- Police operations and police modernization police strategies
- Nano-technology and its potential in forensic science

Outcome:

From the conducted doctrinal research, researcher can safely conclude that:

- India is in need of progress in police technology and this needs to be given some serious considerations, in order to at least match up with the world trends, if not be at par with the foreign tech standards or even go beyond them. The Police Modernization (PM) division of the Ministry of Home Affairs has introduced various programs such as Megacity Policing, City Surveillance Project, Crime Criminal Technology Networking Systems (CCTNS), aimed at creating and upgrading the infrastructure across various cities in the country. These programs are expected to create considerable requirement for equipments such as night vision devices, GPS/GIS for patrol cars, surveillance camera systems, portable x-ray machines, vehicle number plate identification system, cyber patrol and communication monitoring system.
- Forensic medical examination and expert evidence can play a very important role in conviction of the accused in the absence of any direct evidence. Proper guidelines issued by the State can act as a guiding rule to ensure well-equipped and uniform method of reception, treatment and examinations of survivors. This report covers various important issues revolving around forensic medical examination which had been left unnoticed previously. The research covers various aspects through various government reports like Malimath Committee Report, Justice Verma Committee Report, detailed analysis of section 375 of IPC, Rape and death penalty.
- Administration of police agencies can be a complex task, requiring the management of officers with different roles and programs with different goals. It has been noticed that for certain reasons, the state police administrations have not been very successful in controlling, ordering situations and maintaining law. The reasons for this are insufficiency in various directions when it comes to police agency and administration. The researcher in the present report highlights aspects of this inefficiency through committee reports, judicial recommendations and other literature.
- As per the reports by the Union Ministry of Home Affairs, there are four broad major challenges to internal security in the country, which are terrorism in the hinterland of the country, cross-border terrorism in Jammu & Kashmir, insurgency in the north eastern states, left wing extremism in certain areas apart from these, naxalism also continues to be a source of major problems for the country. Hence, the research deals in depth with the extent, the causes of naxalism and the challenges with respect to the same. The research also covers the issue of naxalism with respect to Gujarat.
- The need for police reforms in India is long recognized. During the 26/11 attacks, several police officers tried to combat the AK47- wielding terrorists with their misfiring, wooden-framed, bolt-action short magazine Lee-Enfield rifles – some of which were issued when Queen Victoria was still empress of India and had not been fired for decades. Along with the

better weapons, the police officials should have the knowledge of using new technologies, used for catching criminals. There is an urgent need of better transport facilities, more number of well equipped staff, modern updated weapons, better communication facilities and training for the police officials to fight crimes in the country. The report has tried to do comparative analysis of police administration of India with that of United Kingdom, Northern Ireland, France and Japan. The report tries to furnish through the analysis that all of these countries strictly follow through said laws or try to follow a system of community policing which is totally missing in India.

- The research extensively dealt with the concept of problem-oriented policing (or problem-solving policing, as it is better known in the United Kingdom). The research deals in depth with the various responses which can be taken into notice when applying the concept of problem oriented policing such as concentrating attention on individuals or agencies responsible for the problem, referring the problem to another agency for resolution, coordinating a police response with responses from other agencies, using mediation and negotiation to resolve the problem, etc.
- The government has played a pioneering role in promoting nanotechnology R&D in India. It has taken many initiatives to foster and promote R&D in India through several of its departments. Many schemes/programmes have been launched for infrastructure and human resource development. The government has also undertaken many bilateral/multilateral/ regional initiatives with many countries to promote nanotechnology research, development and innovation (RDI). It has also encouraged PPP model to encourage nano-based product development.

An effort has been made to conclusively compile the research work which is broadly based on above mentioned six emerging and essential areas of the criminal justice system and the security related challenges.

Status: Completed

End Recipients:

Government of Gujarat, National Police Academy, National Judicial Academy, Bureau of Police Research and Development (BPR&D), Central Bureau of Investigation (CBI), Directorate of Revenue Intelligence (DRI), Intelligence Bureau (IB), Joint Intelligence Committee (JIC), Narcotics Control Bureau (NCB), National Investigation Agency (NIA), National Security Advisory Board, Government of India.

Possible Expansion of the Project:

The present study is a first tier research study wherein for the next phase research, the researcher would like to deliberate and carry out intensive research on cyber forensic, forensic accounting, security intelligence and artificial intelligence.

Aims/Objectives:

- To identify the lacunas and suggesting remedies to Surrogacy Regulation Bill, 2016
- To find out the level of farmer's knowledge on chemical pesticide use and practices which are eco-friendly.

Task Initiators:

- Principal Investigator: Dr. Anjani Singh Tomar, Associate Professor of Law, Gujarat National Law University, Gandhinagar
- Co-Investigator: Dr. Bindu Vijay, Assistant Professor of Science, Gujarat National Law University, Gandhinagar
- Co-Investigator: Dr. Viralkumar B. Mandaliya, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

Study was conducted into two parts. First part was on the primary issues with surrogacy in India. There is a lack of legislation regulating the surrogacy process. In 2005, the first attempt at regulating surrogacy was made by the Indian Council of Medical Research (ICMR). The ICMR issued guidelines for regulating Assisted Reproductive Technique (ART) clinics. However there has been no comprehensive legislation regulating surrogacy. Recently the Surrogacy (Regulation) Bill, 2016 was introduced by government. The first part of the project is on Survey on the Lacunae of Surrogacy Regulation Bill, 2016. The questionnaire based survey was carried out among Surrogate mother, practitioner, academician and intended couple from Anand and Ahmedabad district. Second part was on farmer's knowledge on chemical pesticide use and practices. Biopesticides based on living microbes and their bioactive compounds have been researched and promoted as replacements for synthetic pesticides for many years. In spite of long known health impact of pesticides, they are still been used in India. The second part of research aims to find out whether farmers prefer bio pesticide for their farms. The questionnaire based survey was carried out among the farmers from different villages of Gandhinagar and Ahmedabad district. The data in both studies were analyzed using SPSS platform.

Outcome:

- The Surrogacy (Regulation) Bill, 2016 does not fully contain the commercial surrogacy in India. There are many other ways where anyone can misuse the Bill.
- The research find that provision of permitting it to only married couples would also create some problems and issues. As it is evident that bachelors are not permitted to have adoption, in our country, surrogacy could be a better option. If this is also not given, it will led to patients going abroad for the same technology which can be easily developed indigenously.
- The issues related with the transgender and LGBT group has been completely overlooked by this bill. There are many people who would not like to get married, but would love to be parents, nothing is mentioned about those persons.
- Eligibility certificate is also unwarranted, not because we do not accept the document work but because of the fact that the certificate has to be obtained from an authority which will take a lot of time to give the appointment even. The only thing required here is the medical fitness of the surrogate mother. This can be done by the doctors who are actually dealing with the surrogacy. There should be more tests and prescribed way to ensure healthy child & healthy surrogate.
- The study shows that application of pesticides is still increasing at an alarming rate and knowledge of biopesticide is limited only to neem based one.
- The slow response of biopesticides in the management of insect pests was the main cause of poor adoption of biopesticide. Further farmers were unaware of other biopesticides like *Trichoderma*, *Bacillus thuringiensis* etc.
- A proper training for the farmers is necessary to encourage them to use biopesticides. More research needs to be done for effectiveness of biopesticides based on location, crop and season. Information on the use of biopesticides for the management of common crop diseases should be provided to the farmers.
- It is recommended that extensive promotions on the use of biopesticides must be encouraged in order to transform the agriculture sector, to become a 'greener' industry and more sustainable in the longer term.
- The project is also come up with three edited book on biotechnology i.e. Red Biotechnology, Green Biotechnology, and Purple Biotechnology.

Status: Completed

End Recipients:

ICMR (Indian Council of Medical Research), CSIR (Council of Scientific and Industrial Research), ICAR (Indian Council of Agricultural Research) laboratories, Agriculture, Co-operation and Farmer Welfare Department of Government of Gujarat, Science and Agricultural Students, Academicians, Researchers, and Policy makers.

Possible Expansion of the Project:

Edited book on various dimension of biotechnology can be prepared to nurture the academician and practitioner at one platform. Expert's opinion must be taken on The Surrogacy (Regulation) Bill, 2016 and the status of usage and consequences of pesticide in various states need to be assayed.



Aims/Objectives:

The objective of the research study is to revisit the quality of existing legal education provided in the state of Gujarat and create a database so that we could suggest policies and other improvements to be made by the government to improve the status of legal education in the state.

Task Initiators:

- Principal Investigator: Dr. Akil Ali Saiyed, Associate Professor of Research, Gujarat National Law University, Gandhinagar
- Co-Investigator: Dr. Kalpeshkumar L Gupta, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

Looking at deteriorating standard of legal education in the state of Gujarat, researchers initiated the project to create a database of Legal Education Institutions (LEIs) and evaluate quality of legal education provided in the state. Researchers used primary and secondary data for the present research. Researchers tried to collect the data from all 86 LEIs through personal visit, sending questionnaire via mail and post. They sent questionnaires to 49 LEIs out of these 16 were personally visited. Apart from this, 13 LEIs were also visited. Thus in total 62 LEIs were finally approached for data collection. They were able to collect the data from 11 LEIs only. It is pertinent to note that data collected from these 11 LEIs are not sufficient in nature thus no tabulation, statistical analysis can be done.

Outcome:

Legal Education in the state has deteriorated with mushrooming growth in number of legal education institutions in the state. This is applicable to other states also. There is no upto date information maintained by Bar Council of India and on the other side legal education institutions are reluctant to share information regarding their operation.

Researchers has suggested to stop approving new legal education institutions, establish Directorate of Legal Education in the state supported by District Legal Education Officer, setting up of law teachers academy at Gujarat National Law University, Gandhinagar.

Status: Completed

End Recipients:

Ministry of Law, Bar Council of India, State Education Department, State Legal Department, University Grant Commission.



15

Study on the Importance of Police Accountability and its Impact on the Governance of Criminal Justice System in the State of Gujarat

Aims/Objectives:

- To determine the prevailing practices and procedures of police accountability in the state
- To identify the flaws in the existing laws governing police functionaries
- To identify the external influences affecting the police accountability and to suggest the safeguards
- To examine the effect of police accountability on the criminal justice and administration system

Task Initiators:

- Principal Investigator- Dr. Akil Ali Saiyed, Associate Professor of Research, Gujarat National Law University, Gandhinagar
- Co-Investigator- Mr. Mradul Mishra, Assistant Professor of Research, Gujarat National Law University, Gandhinagar

Details of the Activity:

Present study is an empirical research conducted in four districts of Gujarat namely Ahmedabad, Vadodara, Rajkot and Surat. The data was collected through circulating questionnaires and getting them filled from members of Bench, members of Bar (Including Public Prosecutors and defense lawyers) and Police officers. Total 469 questionnaires were filled from the stakeholders including 173 police officers and 296 judicial officers as well as lawyers including public prosecutors.

Outcome:

- 80% police officers and 75% lawyers and judges agreed that there should be a separate police force for investigating crime and maintaining law & order.
- 68% police officers and 61% lawyers and judges believe that if there is absence of political interference in decision making then the performance of police can really be much better.
- 76% police officers and 57% lawyers and judges believe that main reason behind the abuse of power by police is financial allurements.
- 67% police officers and 65% lawyers and judges believe that low level of police accountability is because there is no political party which are willing to do that.

- 63% police officers and 73% lawyers and judges believe that another reason behind low level of police accountability is inadequate/outdated laws.
- 61% of police officers said that the main reason for the acquittal of accused is improper presentation of the case by the public prosecutor while 74% lawyers and judges said that the main reason for the acquittal of accused is improper and flawed investigation.
- Majority of the police officers, judges and lawyers were of the opinion that training in the areas of forensic science, information technology and other cyber technicalities, legal studies and resource management can certainly enhance the performance of police.

Suggestions:

- The investigating officer must be made accountable if the acquittal is because of flawed investigation.
- The functioning of the police should be made free from the political interference and there may be a separate authority to decide transfer, postings, promotions and other services related matters of police.
- The State Police Complaint Authority could be restructured and the provisions regarding the level of police officers, nature of complaint and bar on cognizance should be modified.
- The police investigating crimes and the police maintaining law and order must be separate.
- The police officers must be equipped with necessary training (considering the present challenges) and resources to increase the level of performance. Moreover, the frequency and number of training programs for police officials must to be increased.
- Recruitment procedure of the police force may be made more rigorous with psychological and spiritual tests.

Status: Completed

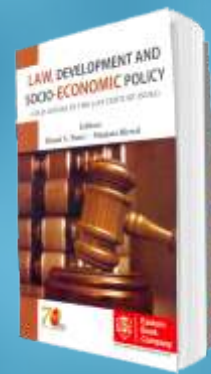
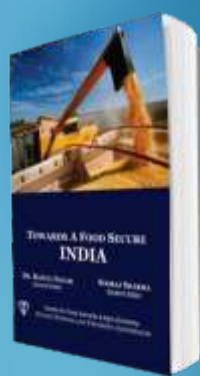
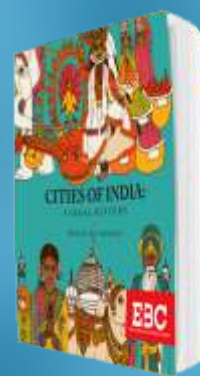
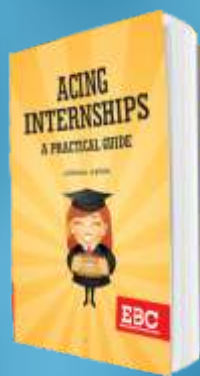
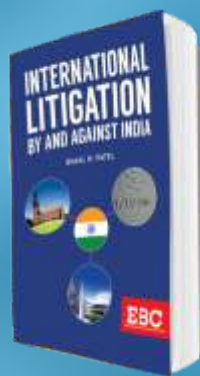
End Recipients:

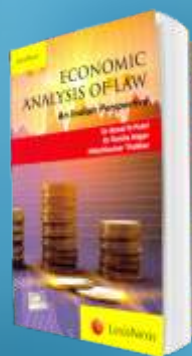
Home Ministry of State of Gujarat, National Police Commission, State Legal Department, National Human Rights Commission, State Human Rights Commission

Possible Expansion of the Project:

Since the study has been conducted in four districts of Gujarat, there is scope that the study can be conducted in more districts of Gujarat and a more comprehensive and reliable outcome can be achieved.

Our Publications





List of On-going Research Projects

Sr. No.	Principal Investigator	Research Project Title	Research Agency
1	Dr. Bimal N. Patel	Assessment of India's Blue Economy Potential, Techno-Legal issues & Targets for 2020 and Beyond	Ministry of Earth Sciences, Government of India
2	Dr. Bimal N. Patel	Antarctica Act of India	Ministry of Earth Sciences, Government of India
3	Dr. Asha Verma	A Study of Implementation of Maternity Benefit Act, 1961 and its comparison with other schemes	National Commission for Women
4	Mr. Marisport A.	Resolving pending cases through Alternative Dispute Resolution under section 89 of Civil Procedure Code: a Case Study	Department of Justice, Ministry of Law and Justice, Government of India.
5	Dr. Vikas Gandhi	A Study on Court Management techniques for improving the efficiency of subordinate courts"	Department of Justice, Ministry of Law and Justice, Government of India.
6	Dr. Kalpeshkumar L. Gupta	"Role of Clinical Legal Education in improving the quality of Legal Education and increasing Access to justice to the marginalized in the State of Gujarat"	Department of Justice, Ministry of Law and Justice, Government of India.





Gujarat National Law University

RESEARCH AND PUBLICATION DIVISION GUJARAT NATIONAL LAW UNIVERSITY

Attalika Avenue, Knowledge Corridor, Koba, Gandhinagar, Gujarat, INDIA-382426.

Tel : +91-79-23276611/2, Fax: +91-79-2327 6613/78781 86624

Email: odrd@gnlu.ac.in, Website: www.gnlu.ac.in