



**MHRD**  
Ministry of Human  
Resource Development  
Government of India



# THIRD PARTY EVALUATION OF NATIONAL RESEARCH PROFESSORSHIP (NRP) SCHEME

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**S. N. Tripathi, IAS (Retd.)**

**Director, IIPA**

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## **LIST OF ABBREVAITIONS AND ACRONYMS**

<b>CSIR</b>	<b>Council of Scientific and Industrial Research</b>
<b>DS</b>	<b>Deputy Secretary</b>
<b>GOI</b>	<b>Government of India</b>
<b>ICAR</b>	<b>Indian Council of Agriculture and Research</b>
<b>ICMR</b>	<b>Indian Council of Medical Research</b>
<b>ICSSR</b>	<b>Indian Council of Social Science Research</b>
<b>ICSU</b>	<b>Institute of Company Secretaries of India</b>
<b>IIPA</b>	<b>Indian Institute of Public Administration</b>
<b>INSA</b>	<b>Indian National Science Academy</b>
<b>MHRD</b>	<b>Ministry of Human Resource Development</b>
<b>NRP</b>	<b>National Research Professorship</b>
<b>NSC</b>	<b>National Science Chair</b>
<b>NSCAC</b>	<b>National Science Chair Advisory Committee</b>
<b>PhD</b>	<b>Doctor of Philosophy</b>
<b>R&amp;D</b>	<b>Research and Development</b>
<b>S&amp;T</b>	<b>Science and Technology</b>
<b>SERB</b>	<b>Science and Engineering Research Board</b>
<b>STEM</b>	<b>Science, Technology, Engineering, Mathematics</b>
<b>UDC</b>	<b>University Department of Chemical Technology</b>
<b>UGC</b>	<b>University Grants Commission</b>

## EXECUTIVE SUMMARY

Ministry of Human Resource Development (MHRD) entrusted to IIPA the Third-Party Evaluation of National Research Professorship (NRP) scheme of the Department of Higher Education of the Ministry. The terms of reference for this evaluation study, as mandated by MHRD are as below:

### TERMS OF REFERENCES

1. To analyse "*Eligibility*" norms and suggest fresh Eligibility norms.
2. To analyse the "*Emoluments & Benefits*" of the beneficiaries of the scheme and suggest new Emoluments & Benefits under the scheme.
3. To analyse the "*Selection Procedure*" for the appointment of the beneficiaries of the scheme and suggest new Selection Procedure under the scheme)
4. To analyse the "*Duties and Responsibilities*" assigned to an NRP under the scheme and propose concise Duties and Responsibilities of the Professors under the Scheme.
5. To analyse the *major achievements* of the scheme vis-d-vis the desired outputs with analysis of parameters such as productive research work contribution, and quality aspects etc.
6. To evolve a *thematic pattern* of the scheme.
7. Suggestions and recommendation to suggest way forward.

### NATIONAL RESEARCH PROFESSORSHIP SCHEME

Government of India had instituted the scheme of National Research Professorship in 1949. The scheme was established to honour distinguished academicians and scholars in recognition of their contribution to the field of knowledge. The scheme recognises, across the country, persons of real eminence who have attained the age of 65 years and who have made outstanding contribution in their respective fields and are still capable of productive research.

The selected personalities are then considered for appointment as National Research Professors. The appointment is made initially for a period of five years which is extendable by another term of five years. Thereafter the National Research Professor is entitled to a life pension.

## **METHODOLOGY**

The IIPA study team utilized the mixed methodology approach and applied a balanced combination of quantitative and qualitative tools for data collection and analysis. The research study comprised the identification of primary and secondary sources of information and gathering other relevant information through literature review, field visit and case study method.

The detailed research methodology and sampling design followed by the study team are as under

### **1. Scope of the Study**

For the evaluation of the NRP Scheme, the last 10 serving National Research Professors were taken into consideration.

### **2. Data Collection**

#### **A. Collection of Secondary Data**

The study team collected secondary information from the following sources: -

- a) Official website of MHRD
- b) Copies of relevant documents provided by the Ministry
- c) NRP Scheme Guidelines, Project status, and updated notifications related to scheme.

#### **B. Collection of Primary Data**

Primary data was collected from the NRPs in the form of questionnaires. Data was collected from seven NRPs through emails, telephonic, personal interviews, and video conferencing.

For collecting primary data, the following modes were applied:

- a) Field visit and Personal Interview
- b) Online video conferencing
- c) Meeting with ministry officials.

### **3. Process Steps of Evaluation Study**

The study evaluated the NRP Scheme, its progress, and prospects since the inception of the Scheme in 1949.

The following process steps were carried out to study this Scheme:

#### **a) Identification of the Scheme**

The scheme guidelines and documents provided by the MHRD were analysed and parameters were formulated. Based on the parameters the questionnaire was prepared and data was collected through the annual progress report and personal interview methodology.

#### **b) Designing of Questionnaires**

Following parameters were taken into consideration for the evaluation study:

1. Visibility of the Scheme
2. Eligibility Norms
3. Selection Procedure
4. Financial Aid
5. Duties and Responsibility of NRPs
6. Number of Field/Discipline-wise and Yearly Appointments
7. Benefits / Outcomes
8. Other Suggestions and Recommendations

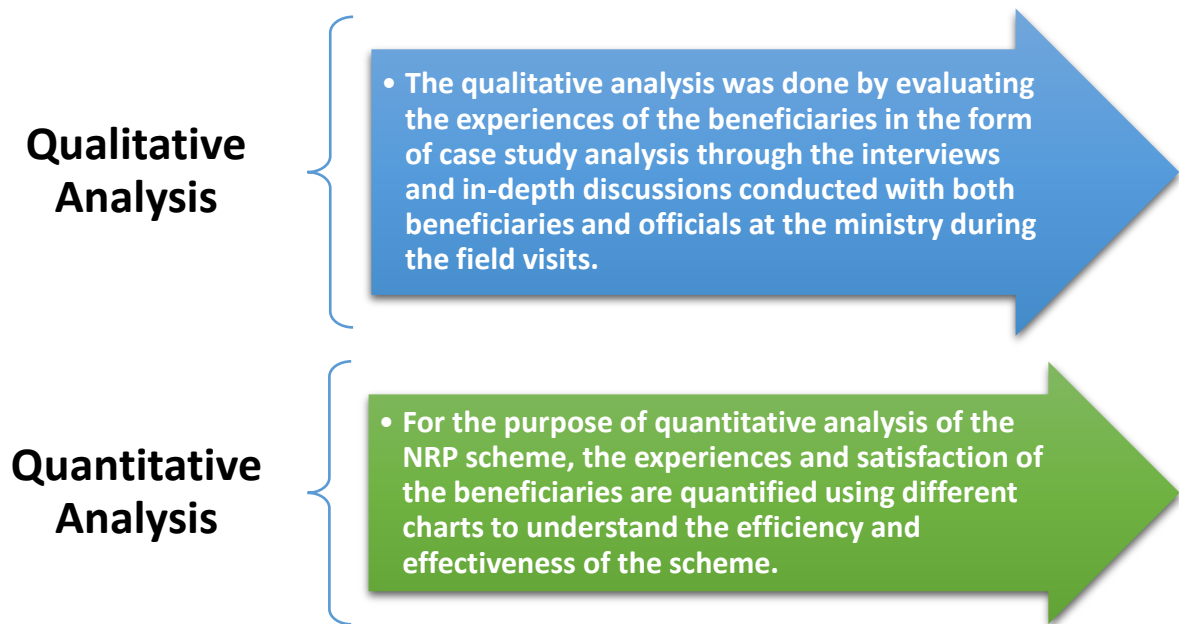
#### **c) Case Studies and Field Visits**

Following NRPs were interviewed for the evaluation study:

1. Prof. Andre Beteille, New Delhi
2. Prof. Suryakant Bali, New Delhi
3. Prof. S L Bhyrappa, Mysore
4. Prof. Goverdhan Mehta, Hyderabad
5. Prof. P N Tandon, New Delhi
6. Prof. M S Valiathan, Mangalore
7. Prof. R A Mashelkar, Pune

#### d) Data Analysis

1. The data was analysed using the mixed methodology approach. The detailed analysis is described below.
2. Descriptive statistics of the data was analysed using MS Excel and MS Word.



#### 4. Limitations of the study

- Since the number of NRPs are very selective in the country, the data available was limited to conduct a survey and therefore case study methodology was used for the evaluation.
- Some of the NRPs were unavailable to provide their experiences of the scheme.
- Due to the absence of proper records and details of NRPs, establishing communication and accessing useful information was problematic.

## SUMMARY OF FINDINGS

The study team observed and derived the following findings while analysing the data pertaining to the scheme:

### **1. Visibility Status:**

The data provided by the seven NRPs of the scheme constructively highlights the point that the visibility of the National Research Professorship Scheme needs to be considered seriously. Most of the NRPs believe that the scheme or the 'Honour' is unknown to the general public and there is a need to bring reforms to its visibility.

### **2. Eligibility Norms:**

The data provided by the seven NRPs suggests that the existing eligibility norms may be revised to include new provisions under the age criteria and the level of contributions of the nominees. Age criteria under the eligibility norms was found to be unsuitable as many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to age limitation. Further NRPs suggested that an NRP's pan India as well as a global presence in the field of academia may be considered before the appointment.

### **3. Selection Procedure:**

The selection procedure lacks a set framework and guidelines regarding the application procedure as well as selection criteria. The process of nomination and final selection announcement is also not specified currently. There is no specified application form or deadlines regarding the same.

### **4. Financial Aid (Honarium, Pension and Contingency Funds):**

The research study gives an indication that there is a requirement of clearly defining the utilization guidelines for the financial assistance provided to the NRPs. The data also suggested that financial assistance also needs to be revised. Detailed statistics under the three subheadings namely: Honarium, Pension, and Contingency Funds have been described below:

#### **A. Honarium**

The honarium statistics shows that around 70% of the NRP's are not satisfied with the current honarium and they have suggested a revision for the same, since these funds are not enough to support the current expenditure in the field of research.

The study shows an uneven revision of the honorarium. The honorarium in the initial 35 years was Rs. 2500 which later got revised to Rs. 3000 in 1982. It was further revised to Rs. 5000 to Rs. 8000 after 11 years and gained revised to Rs. 25000 in 7 years. The most recent revision was done in 2009 to Rs.75,000. The trend of revision needs to follow a statutory procedure and timeline.

## **B. Pension**

The pension funds as per all the honourees were enough to run their post retirement errands. The data analysis graph depicts a noticeably clear picture of all the NRPs been satisfied with the current pension trend.

The graphs depict that the pension was started 20 years after the commencement of the scheme. The first pension was started in 1969 at Rs.1000 till 1991 and after 22 years it was revised to Rs 3000. The third revision took place in 1999 the amount was revised to Rs. 9000. The most recent revision was done in the year 2009 revised to Rs. 25,000.

## **C. Contingency Fund**

The contingency funds required more clarity in term of utilization. The contingency fund was started in 1987 with Rs. 20,000, which was revised after 12 years in 1999 to Rs. 50,000. The most recent revision took place in 2009 to Rs. 1,00,000. The revision of financial funds follows an uneven trend both monetarily and time wise. A standard procedure needs to be adopted.

## **5. Duties and Responsibilities:**

As per the data analysis it signifies that 85% of the NRPs agreed that there need to be certain duties and responsibilities assigned to the NRPs while the 14% of them disagreed and pointed out that there is no such requirement as many NRPs already stay engaged with their own priorities. In addition to this all the NRPs agreed that the NRPs may be recommended to write an annual report describing the work they did as the National Research Professors in the year.

## **6. Major Achievements of the Scheme**

As per the data collected under the study and responses of NRPs interviewed by the study team, the scheme was found to be successful in enabling the NRPs in executing many accomplishments and plans. The main objective of the scheme i.e. recognizing the best of intellectuals in their respective fields was also nearly achieved.

## **7. Additional Findings**

### **A. NRP Appointments (Year-wise / Discipline-wise / Gender wise)**

- An irregular pattern of appointments through the years since 1949 was observed throughout the data.
- Further, the number of appointments made in different fields of specialization under the scheme since 1949 is also not reform and some areas of specializations have been considered more often than the other areas while certain areas of specializations that emerged in the later decades since the scheme's inception have been entirely missing.
- The data also reflected a skewed gender ratio among the appointments made under the scheme.

### **B. Scheme Timeline**

Another important finding that was made by the study team was that there is an irregular pattern of appointments as the number of appointments made per year does not follow any guideline. Moreover, a lack of timeline under the scheme was observed. The dates and deadlines for application submissions and nominations have not been defined under the scheme. Further, no timeline has been included for public announcements as well as appointments made under the scheme.

### **C. Centralized Online Platform**

From the study it was observed that a centralized online system of data and updates regarding the scheme is required for all the NRPs as well as general public for information exchange and updates.

## **OBSERVATIONS AND SUGGESTIONS BY THE NRPs**

The observations and the suggestions shared by NRP Honourees with the study team are summarised below:

### **1. Scheme Framework**

Aims and Objectives of the Scheme should be well defined in order to effectively execute the scheme. There needs to be an institutionalization of procedures and fund utilization guidelines under the scheme.

### **2. Visibility Status of the Scheme**

The scheme and appointments made under it lack a publicity aspect which hinders the main of 'encouragement' of the honourees. The NRP appointments may be made public through press releases, media coverage and associating them with an institute or university to further their contribution in the domain of their expertise.

### **3. Eligibility Norms**

The NRPs suggests that the existing eligibility norms may be revised to include new provisions under the age criteria and the level of contributions of the nominees. Age criteria under the eligibility norms was found to be unsuitable as many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to age limitation. Further NRPs suggested that an NRP's pan India as well as a global presence in the field of academia may be considered before the appointment

### **4. Selection Procedure**

The NRPs suggested there may be a selection committee consisting of experts from different areas of specializations as well as retired NRPs under the scheme. This selection committee could play as a guiding figure for the Ministry officials and Ministers during finalization of appointments.

NRPs also suggested that there should be zero political interference and zero ideological interference in the selection process. Further, NRPs have an opinion that selection process could be made transparent and more structured.

## **5. Financial Support**

The financial allocations under the scheme may be revised. NRPs have an opinion the current honorarium, pension and contingency funds have remained static for many years while cost of travel, of living, of books, of attending conferences etc., have gone up considerably hence, there is a strong case for considering upward revision under all three categories.

NRPs also believe that honour should not quantify in terms of monetary benefit. But certain clarity is required from Ministry regarding utilisation of contingency fund. Also, that contingency fund should be as per requirement of the NRP, and it should be well defined how to use it.

## **6. Duties and Responsibilities**

The scheme lacks well-defined rules regarding the roles and responsibilities of the NRPs which is crucial as the NRP is not only an honor but also a Professorship which demands that the NRP may be required to fulfill few responsibilities in national service.

NRP's also be given roles to provide mentorship to the young generation and young scholars. Their wisdom, experience and excellence should be utilized to boost the work of young generation by putting forth their own experience and suggestions.

## **7. Annual Report Submission**

NRPs strongly believes that it should be mandatory to submit annual reports of work done including achievements and difficulties encountered as NRPs are supported by Government grants from taxpayer's money.

## **8. Facilitation of Annual or Quarterly Meetings**

Facilitation of annual or quarterly meetings of the serving NRPs with the MHRD could be organized in order to maintain productive ties and further encouragement of the honorees.

## **9. Post-Tenure Guidelines**

At the end of their tenure, NRP may be asked to produce a publishable report of the various research works and accomplishment undertaken and achieved by them. They may also be invited or public lectures in Public Universities and other Institutions of Eminence.

## **10. Benchmark of Excellency**

In terms of excellence, the benchmark set by the very first appointment was Nobel Laureate Dr. C. V. Raman. The scheme holds a prestige of its own, the title of NRP is a badge of honour for the NRPs, and therefore the selection committee may evaluate the international and national presence of the nominee as well as their incredible contributions to the domain of knowledge before their final selection.

## **11. Centralised Data System**

During the study it was observed most of the NRPs suggested that if a comprehensive online database regarding the NRP scheme is available on the MHRD website, it would enhance the visibility of the scheme. A dedicated web portal for the scheme would benefit the scheme in this era of Digitalization.

## **RECOMMENDATIONS AND SUGGESTIONS BY IIPA**

**IIPA recommends continuation of the scheme as the scheme is an expression of the country's gratitude towards the academic legends and their contribution that has put forth India on world map.** These contributions need to be honoured, highlighted, and celebrated by the nation. This also allows the government to set a precedent for the younger generation and help them in drawing inspiration from NRPs' dedication, handwork, discipline, and quest for knowledge.

The National Research Professorship (NRP) India's premier and highest honour, celebrates the greatness of the spirit and transformative leadership of academicians and researchers in India. In the past seven decades, the honour has been bestowed on over 46 outstanding academicians in the field of research, whose selfless services has benefited our society.

However, in order to make the scheme more effective, the study team of IIPA has the following summary suggestion and recommendations for consideration of the competent authorities.

### **1. Visibility Status may be enhanced**

Announcement of the NRP appointments may be made public via media platforms and press releases. Some constant and constructive efforts might be taken to enhance the visibility of the scheme by organizing events and lectures of selected NRPs for general public specifically the young students in colleges and universities in the country.

## **2. Eligibility Norms may be revised**

There may be some amends in the eligibility norms. Relaxation in the age criteria of one to two years may be given to the deserving and outstanding intellectual professors as age criteria under the eligibility norms was found to be unsuitable and many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to this.

IIPA also suggests the nominee may have received recognition for his/her work from national / international scientific bodies such as fellowship in prestigious academies and S&T awards.

## **3. Selection Procedure may be revised**

For further amplification of the scheme IIPA suggests following selection procedure for appointment of the NRPs.

### **A. Applications/Nominations:**

- a) The call for applications or nominations may be kept open throughout the year.
- b) The details of the same may be notified through a dedicated Web Portal on the MHRD website.
- c) An Application/ Nomination form may be set up for acquiring of all the essential details of the candidates. The same form may aid the selection committee during their final selection.
- d) The nominations may also be received from previously serving NRPs as well as literary experts, academicians, national level institute, universities, and numerous other recognized associations.

### **B. Selection Committee:**

- a) **Sub-Selection Committees (SSC)** may be established to aid the already existing committee consisting of the Hon'ble Prime Minister, Hon'ble Home Minister, Hon'ble Finance Minister and Hon'ble HRD Minister.
- b) These SSCs may include the experts and recognized persons of eminence from different areas of specialization as well as retired NRPs of that specific field.  
**The SSC members could be some prominent professors or professional from specific field for which a nomination has been considered. Any previously served NRP could also be considered for empanelment in the SSC.**

- c) The SSCs may screen the nominations and applications and forward a provisional list of selected candidates for approval and final selection from the committee of Hon'ble Ministers. For the same, the SSCs may meet once a year or whenever the need arises and recommend suitable candidates from specific fields.

### **C. Final Selection and Announcement:**

The final selection may be approved by all the four Hon'ble Ministers and the name of the newly appointed NRP, then, may be announced by the Ministry of Human Resource and Development through the various public mediums/ platforms.

The honouree(s) may be formally recognised for the honour through following mechanism: -

1. The list of the recipient's name shall be placed on the NRP web portal and press release through newsletter by the MHRD.
2. The individual may be informed through formal letters and email indicating that the individual has received the honour.
3. The honouree shall be presented a framed certificate or engraved plaque as a recognition.

### **4. Excellence factor needs to be maintained**

Aspired by C.V. Raman Sir, the same level should be maintained, and it may not be influenced, therefore the selection committee may consider the international and national presence of the nominee before the final selection.

### **5. Financial Assistance may be revised**

The financial support and honorarium may be revised as per the seventh pay commission or in accordance with the different needs of different NRPs in their respective research work. The revision may enable NRPs to cover all the expenditure that may incur in the publication of their research work.

### **6. Duties and Responsibilities may be notified**

Certain duties and responsibilities may be assigned to the NRPs. In addition, an Annual Report or a collection of their works and achievement may be made mandatory for submission. The NRPs may also be associated with different universities and research institutions

## **7. Annual General Meetings may be organized**

Annual General Meetings may be organized for the NRPs with the ministry and committee members on a yearly basis for feedbacks and other assessments.

## **8. Empanelment of NRPs with the Universities/ National level Institution**

The ministry may use the knowledge and experience of the beneficiaries to bring reforms in the education system of our country. The NRPs may be associated with the national level institutes and universities where special guest lectures and mentorship programs may be organized.

## **9. Collaborations between NRPs and GOI**

MHRD may organize public lectures or events and invite the NRPs for encouragement and promotion of research work in the country. Their suggestions may be considered for enhancement of the education system and research institution in the country.

## **10. Mentorship Programme**

MHRD may institutionalise the NRP Scheme in a manner to facilitate a mentorship program under the newly appointed NRPs. This may facilitate an efficient coordination with the NRPs to enable a comprehensive system of using their intellectual repository.

## **11. Appointments may cover wide range of disciplinary fields**

The scheme may be able to cover multiple and diverse fields of academics and knowledge rather than concentrating on certain specific fields as this will increase and diversify the intellectual repository of the scheme which would enable the fulfilment of the purpose of the scheme in a more efficient way.

## **12. Gender Ratio**

Since the MHRD has been constantly putting efforts to encourage the women laurels of our knowledge repository, more female researchers and professors may be promoted under the Scheme as the data suggests that the scheme has benefited only 7% of women honourees in the past.

## **13. Publications and Technical Support**

The hon'ble ministry may facilitate the arrangement of a logistical and technical support for the NRPs in terms of to help them in research and publication of their books.

#### **14. Dedicated MHRD NRP Portal**

There may be an online webpage available for NRP scheme at MHRD's website. The portal may specify the procedure of the NRP selection, mention the purpose of the scheme, endorse the achievements of scheme and mention the beneficiaries and their achievements in the field of research. Also, their annual reports may be published on this portal and put in public domain. The portal would also contribute in increasing the visibility of the scheme.

#### **15. Central Database of all NRPs**

A database may be maintained of all the past and present beneficiaries along with their contact details and corresponding addresses and other relevant details for future evaluations of the scheme.

#### **16. Online Publications and Media releases**

The achievements and honours of the NRPs may be published by NRP on their portal and may be publicised on media platforms by the MHRD. Furthermore, the annual reports and work of the NRPs may be made available through digital archives.

#### **17. Digital Intellectual Repository**

A dedicated digital library portal of the NRPs research articles, books and projects may be maintained. And NRPs' research papers, books and projects may be put in public domain through the digital library, a special section dedicated in their name under the title of National Research Professors.

#### **18. Post-Tenure Guidelines**

At the end of their tenure, NRP may be asked to produce a publishable report of the various research works and accomplishment undertaken and achieved by them. They may also be invited or public lectures in Public Universities and other Institutions of Eminence.

#### **19. Scheme Timeline**

Another important finding that was made by the study team was that there is an irregular pattern of appointments as the number of appointments made per year does not follow any guideline. Moreover, a lack of timeline under the scheme was observed. The dates and deadlines for application submissions and nominations have not been defined under the

scheme. Further, no timeline has been included for public announcements and appointments made under the scheme.

## **20. Strengthen International Research Collaboration**

Through the Scheme NRP's may strengthen international collaboration in their respective areas with the national level universities and young scholars of the country. Such International ties could boost India's R&D and strengthen the knowledge economy.

## **21. Best Practices**

The list of best practices recommended by IIPA are as follows:

### **1. Distinguished Biotechnology Research Professorship Scheme**

Selection procedure of the scheme may be considered.

### **2. INSA Distinguished Professors Scheme**

Financial Emoluments, and Duties and Responsibilities may be considered.

### **3. SERB Research Scientists Scheme**

Financial Emoluments may be considered.

### **4. National Science Chair**

Selection Procedure, Financial Emoluments, and Duties and Responsibilities may be considered.

### **5. ICAR National Professorial Chairs**

Selection Procedure may be considered.

### **6. Sahitya Akademi Award**

Selection Procedure may be considered.

### **7. Jnanpith Award**

Selection procedure may be considered.

### **8. Sangeet Natak Akademi Ratna Award**

Selection Procedure may be considered.

**(For detailed description of the Schemes, please refer to Chapter 5 'Best Practices')**

## **22. New Thematic Pattern may be formulated**

Based on suggestions and recommendations and other best practices, IIPA has formulated a thematic pattern for the National Research Professorship Scheme to be considered by the competent authorities for the revision of the scheme. The detailed thematic pattern has been described under the subheading '**NEW THEMATIC PATTERN FOR NRP SCHEME**' in the Chapter 4 '**SUGGESTIONS AND RECOMMENDATIONS**' (pp.99).

**CHAPTER 1**  
**INTRODUCTION**

# 1. INTRODUCTION

## 1.1. BACKGROUND

In every society, exceptional talented personalities who have contributed substantially to their knowledge domain and to social development of that society are respected and recognized. India has been following a tradition of honouring its talented academics through the National Research Professorship (NRP) Scheme. Government of India had instituted the scheme of National Research Professorship Scheme in 1949. The scheme was established to honour distinguished academicians and scholars in recognition of their contribution to the field of knowledge.

The NRP Scheme is one of the oldest and highly respected schemes constituted with the aim of honouring and rewarding the exceptionally talented persons in India. The scheme recognises, across the country, Persons of real eminence who have attained the age of 65 years and who have made outstanding contribution in their respective fields and are still capable of productive research.

The Scheme, since its inception in 1949, continues to be innovative in nature as renowned academics are given opportunities to keep themselves engaged in productive research in their chosen fields.

### **Ministry of Human Resource Development (MHRD)**

The essence of Human Resource Development is education, which plays a significant and remedial role in balancing the socio-economic fabric of the Country. Since citizens of India are its most valuable resource, our billion-strong nation needs the nurture and care in the form of basic education to achieve a better quality of life. This warrants an all-round development of our citizens, which can be achieved by building strong foundations in education. In pursuance of this mission, the Ministry of Human Resource Development (MHRD) was created on September 26, 1985, through the 174th amendment to the Government of India (Allocation of Business) Rules, 1961.

### **Department of Higher Education, MHRD**

The Department of Higher Education, MHRD, is responsible for overall development of the basic infrastructure of Higher Education sector, both in terms of policy and planning. Under a planned development process, the Department looks after expansion of access and qualitative improvement in the Higher Education, through world class Universities, Colleges and other Institutions.

## **1.2. NATIONAL RESEARCH PROFESSORSHIP SCHEME (NRP)**

Government of India had instituted the scheme of National Research Professorship in 1949, to honour distinguished academics and scholars in recognition of their contribution to the field of knowledge.

### **Objective of the Scheme**

The primary aim of the scheme is to honour distinguished academics and scholars in recognition of their contribution to knowledge and therefore, no specific duties and responsibilities have been assigned to National Research professors. However, they are free to continue their research work in their own fields at the University or Institution of their choice and are expected to send annual reports on the research work done by them to the Government.

### **Eligibility**

For appointment as National Research Professor, any Indian National who have attained the age of 65 years and who have made outstanding contribution in their respective disciplinary fields is eligible to be considered.

Another important criterion is that the person in consideration shall also still be capable of productive research. The appointment is made initially for a period of 5 years which is extendable by another term of 5 years. Thereafter, a National Research Professor is entitled to life pension.

### **Selection Procedure**

The selection for appointment of National Research Professors is made by a Committee consisting of Prime Minister, Minister of Human Resource Development, Home Minister and Finance Minister. In appropriate cases, the Minister of HRD initiates the proposal on file for appointment, which is seen thereafter by other Ministers and the Prime minister. The maximum number of existing National Research Professors at any given time, excluding those who have retired on life pension, is not to exceed 12. The general convention is to keep at least 2 positions vacant to deal with any immediate requirements.

### **Emoluments and Other Benefits**

The post of National Research Professor carries an honorarium of Rs.75,000/- per month. After completion of first term or the extended second term, a National Research Professor is entitled to a life pension of Rs.25,000/- per month. The honorarium and pension paid to National Research

Professor are exempted from Income Tax. In addition to honorarium, a lumpsum payment for meeting expenditure on contingencies like office expenses, salary of supporting staff, purchase of equipment. etc. is also admissible to the National Research Professor. At present, Contingency grant up to a maximum of Rs.1,00,000/- per annum is given to a National Research Professor.

### **Duties and Responsibilities**

No specific duties and responsibilities have been assigned to National Research Professors. They are free to continue their research work in their own fields at the University or Institution of their choice. However, they are expected to send to the Government annual reports on the research work done by them.

### **National Research Professors**

The List of NRPs appointed since 1949 has been included in the Annexure 1.

### 1.3. OBJECTIVE OF THE STUDY

The main aim of the study is to assess the effectiveness of the scheme and whether the scheme has been successful in achieving its mandate of honour and to suggest measures to improve the implementation of the scheme in terms of eligibility criteria, financial assistant, quality work contribution in their respective field and suggest merger with any other scheme or way forward.

The objective of the study based on thematic assessment of the NRP Scheme are as follows:

1. To analyse "*Eligibility*" norms and suggest fresh Eligibility norms.
2. To analyse the "*Emoluments & Benefits*" of the beneficiaries of the scheme and suggest new.
3. To analyse the "*Selection Procedure*" for the appointment of the beneficiaries of the scheme and suggest new Selection Procedure under the scheme.
4. To analyse the "*Duties and Responsibilities*" assigned to an NRP under the scheme and propose concise Duties and Responsibilities of the Professors under the Scheme.
5. To analyse the *major achievements* of the scheme vis-d-vis the desired outputs with analysis of parameters such as productive research work, and quality aspects etc.
6. To evolve a *thematic pattern* of the scheme.
7. To suggest way forward.

### 1.4. SCOPE OF THE STUDY

For the study of Third-Party Evaluation of MHRD's National Professorship scheme we analyzed the experiences of the beneficiaries of the last 10 years of the scheme. A total of 10 beneficiaries were identified and their contact and location details were ascertained through various means.

**Table 1.1 Details of NRPs**

S. No.	Name of the Beneficiary	Location
1.	Dr. Jayant Kumar Ray	Kolkata
2.	Dr. Suryakant Bali	New Delhi
3.	Dr. S.L. Bhyrappa	Mysore
4.	Dr. Ashok Gajanan Modak	Mumbai
5.	Dr. P.N. Tandon	New Delhi

6.	<b>Dr. M.S. Valiathan</b>	<b>Mangalore</b>
7.	<b>Dr. R.A. Mashelkar</b>	<b>Pune</b>
8.	<b>Dr. Andre Beteille</b>	<b>New Delhi</b>
9.	<b>Dr. Goverdhan Mehta</b>	<b>Hyderabad</b>



**Figure 1.1 Locations of NRPs**

## **Sampling**

Primary data is collected from the concerned officials at the MHRD ministry and the beneficiaries of the scheme in the form of questionnaires, Interviews, telephonic conversation with the 9 identified beneficiaries of the last ten years from Telangana( Hyderabad), Karnataka( Mysore, Manipal, Bangalore), New Delhi, West Bengal( Kolkata), Maharashtra( Mumbai).

## **Methodology**

The study team applied a balanced combination of qualitative and quantitative tools of the data collection. The research study comprised the identification of the primary and secondary sources of information. The detailed evaluation pertaining to research methodology and sampling design followed by the study team are as under: -

### **A. Data Collection**

#### **Secondary Data**

The study team collected secondary data information from the following sources:

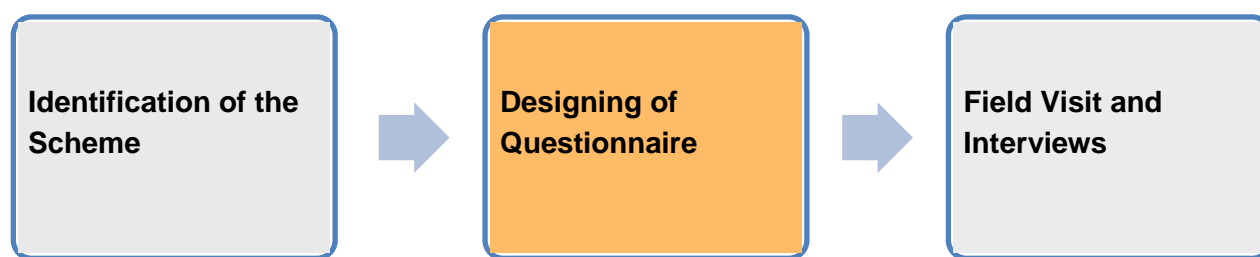
1. Kick off meeting with the team of Department of Higher Education, MHRD to gain an understanding about the objectives of the scheme, it's framework and guidelines.
2. A detailed discussion with the DS and section officer of the department to determine the structure, guidelines, financial assistance involved NRP's achievements and contributions of their respective fields.
3. Official files/ documents and past records were traced from the MHRD which includes Details of all the NRPs (serving and retired) and Annual Reports submitted by the NRPs.

#### **Primary Data**

**The Primary data was collected through the following sources:**

1. Telephonic and E-mail conversations with NRPs.
2. Field visits and Interviews with the Beneficiaries.
3. Interviews with the concerned authorities in the Ministry.

## B. Approach



*Figure 1.2 Research Methodology Process*

### 1.5. RESEARCH STUDY WORKFLOW

This research assesses the NRP Scheme, its purpose, eligibility criteria, selection criteria, financial assistance, duties and responsibilities attached with the scheme and performance of the scheme since its inception 1949. The research work was carried out in the following manner:

#### 1. Identification of the Scheme

The NRP scheme guidelines, framework, objectives and documents/ files, details of the beneficiaries provided by the Ministry of Human Resource and Development were studied extensively to gain an insight into the policy framework of the scheme.

#### 2. Designing of Questionnaire

For the purpose of collection of data, a questionnaire was designed to analyze and capture the insight and experiences of the NRPs with the scheme. The questionnaires helped in consolidating the data the process of application of the scheme, the selection process, the honorarium, pension and contingency expenses and aid, the responsibility associated with the scheme and the benefits received by the NRPs of the scheme. The questionnaire is attached in the Annexure.

#### 3. Field visits and Personal Interview

For the purpose of evaluating the functioning and efficiency of the NRP scheme, the nine NRPS and pensioners were contacted through telephonic conversation and in person interview to their respective residence to get the holistic view of the scheme.

## **1.6. DATA ANALYSIS**

### **Qualitative Analysis**

The qualitative analysis was done by evaluating the experiences of the beneficiaries in the form of case study analysis through the interviews and in-depth discussions conducted with both beneficiaries and officials at the ministry during the field visits.

### **Quantitative Analysis**

For the purpose of quantitative analysis of the NRP scheme, the experiences and satisfaction of the beneficiaries will be quantified used Likert scale to understand the efficiency and effectiveness of the scheme.

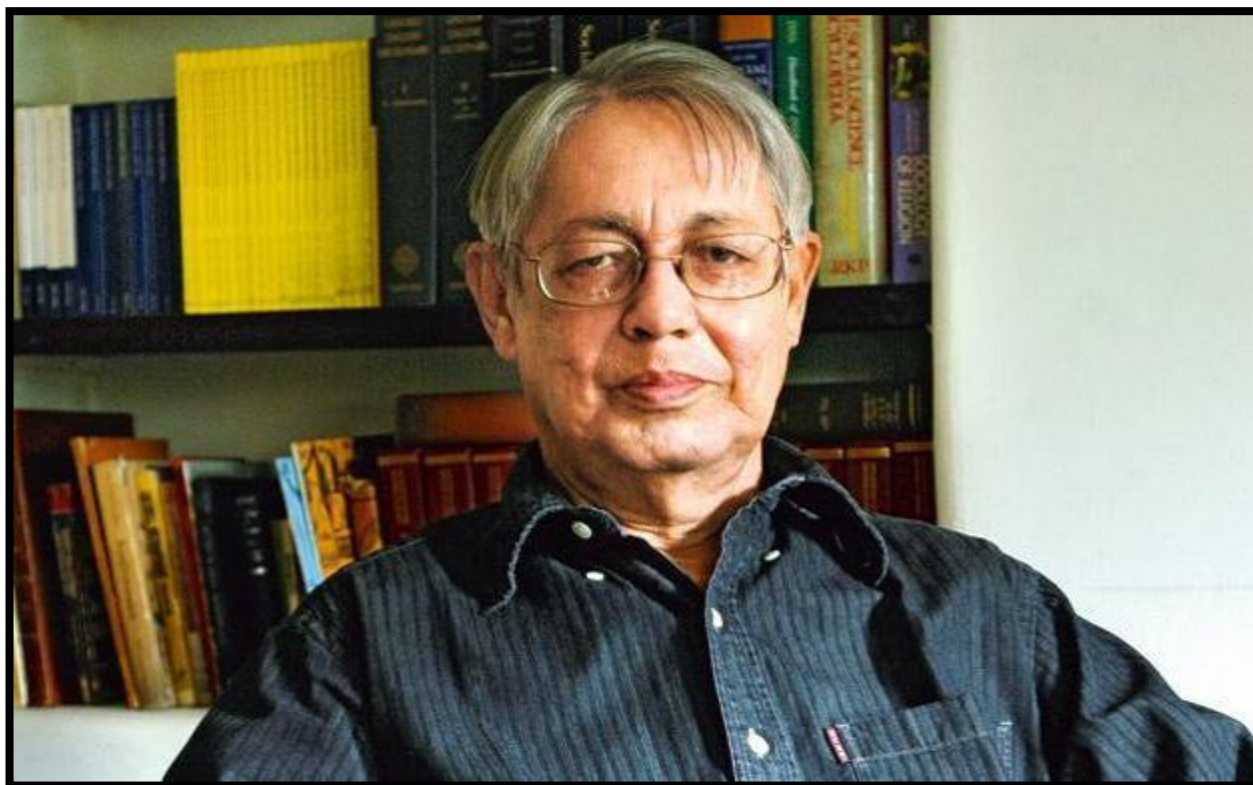
## **1.7. LIMITATION OF THE STUDY**

1. Since the number of NRPs are very selective in the country, the data available was limited to conduct a survey and therefore case study methodology was adopted for the evaluation.
2. Some of the NRPs were unavailable to share their views and experiences of the scheme.
3. Due to the absence of proper records and details of NRPs, establishing communication and accessing useful information was problematic.

**CHAPTER 2**  
**CASE STUDIES AND FIELD VISITS**

## 2. CASE STUDIES AND FIELD VISITS

### 2.1. ANDRE BETEILLE



*Figure 2.1 Prof. Andre Beteille, NRP (2006, 2011)*

**Prof. Andre Beteille** is a Professor Emeritus of Sociology at Delhi School of Economics in University of Delhi. In his long and distinguished career, he has taught at Oxford University, Cambridge University, the University of Chicago and the London School of Economics.

He has also been Professor Emeritus of Sociology in the University of Cambridge, the London School of Economics, the Erasmus University of Rotterdam, the University of California at Berkeley, and the Institute of Advanced Study, Berlin.

Prof. Beteille was born in September 1934 in the town of Chandan Nagore, then under French rule – the youngest of three brothers and a sister. His father was French and mayor of the Chandan Nagore Municipality. Thus, he is a French parentage and, in many ways, a quintessential Bengali Bhadra Lok who has Bengali mother and grandmother. They left a deep impression on him.

Beteille studied at Chandan Nagore and at a boarding school in Patna, before moving to Calcutta in 1946. He has had his higher education in Calcutta where the family shifted after independence. He graduated from St. Xavier's College, Calcutta. He started his studies as a student of physics but halfway switched to anthro-pology, inspired in part by N.K. Bose, who later became his first intellectual mentor.

### **Academic Research and Contributions:**

He did honours in anthropology at University of Calcutta and had also completed M.Sc. from the same university. After a brief stint at the Indian Statistical Institute as a research fellow, he started teaching degree courses and shortly after the Department of Sociology opened in Delhi and was emerging as a premier department so Beteille moved there as a lecturer in sociology and began research for Ph.D. under M.N. Srinivas who was then heading the department.

Beteille began his career as a specialist in social stratification and questions of equality and universality. From 1990, he has started taking deep interest in liberal philosophy and issues arising from poverty and social injustice. He is the first Indian sociologist who saw the relevance of the theories of John Rawls and creatively applied his thought to sort out the tangle that policies on positive discrimination.

### **Awards and Achievements**

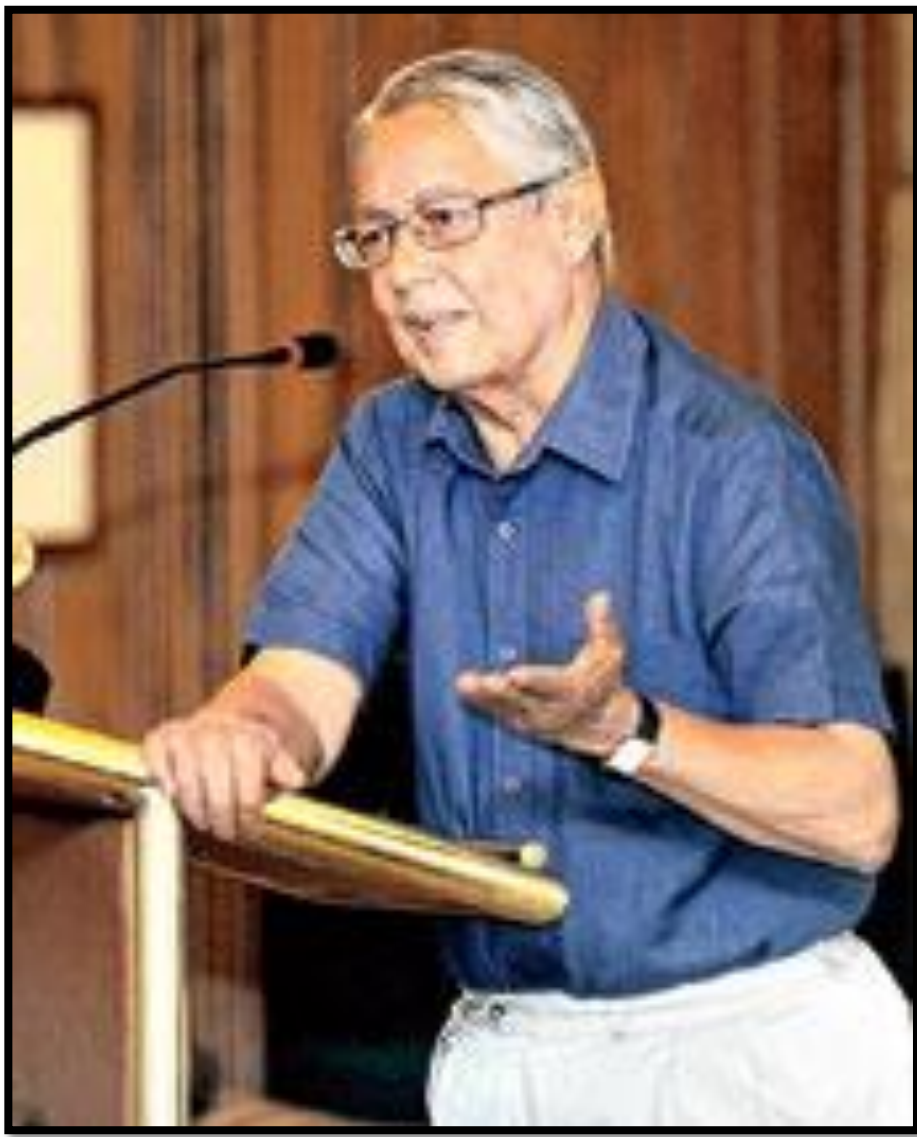
He even at an early age received numerous awards and fellowships from several universities both in India and abroad. He was the first Nehru Fellow. One may also add that in 1992 in recognition of his high scholarly contributions to the field of sociology he was elected as a Fellow of the British Academy – a distinction that rarely comes to an Indian and that too to a sociologist.



*Figure 2.2 Dr. Beteille receiving Padma Bhushan*

Professor Beteille has worked as Chancellor, North-Eastern Hill University and Chairman, Indian Council of Social Science Research. In 2005, in recognition of his work in the field of sociology and his distinguished service to the nation, he was awarded the Padma Bhushan by the President of India.

The same year he was appointed as a member of the Prime Minister’s National Knowledge Commission which he quit in protest in 2006, following a proposal for increasing caste-based reservations. The same year, he was made National Professor, and is currently Chairman of the Centre for Studies in Social Sciences, Kolkata.



*Figure: André Beteille delivering a talk on civil society at an event.*

## **OPINIONS OF THE NRP**

### **1. Visibility and Public Disclosure**

As per Dr. Andre, his memory of NRP and its prestige goes back to his younger days when his mother would ask him when he would get to be an NRP which led a great impact on Dr. Andre’s sentiments with the honour and it’s association. Dr. Andre specified that even though he knew about the scheme he never wished to apply. It was Mr. Banerjee, the Education Secretary of that time who came to his home for inviting him for this honor and gratitude.

He believes that NRP is a big recognition that should only be offered to the premium scholars and whose contributions are well known to the world and their field of specialization. NRP should be treated as a gesture of respect to those who have served to the country with their inputs in enhancing the knowledge and putting our country on the world map in academics and innovation.

## **2. Honorarium and Financial Aid**

He was satisfied with the honorarium as well as the pension that he's been currently availing. He believes that honour should not be quantified in terms of monetary benefit.

## **3. Duties and Responsibilities**

According to Dr. Andre there should not be any responsibilities attached but the NRP's and no expectation to teach and give guest lectures and do research.

The scheme should benefit those laurels whose work has made significant and change making impact in their field of academics in general.

## **4. Involvement and contribution at university, academics of national importance**

Dr. Beteille was in support of the idea for NRPs to be engaged and involved with Public Universities and continue their work.

## **5. Suggestions and recommendations for improvement of the scheme**

Prof. Andre views it as it is a good scheme but must be applied with care and should not be politicized.



*Figure 2.3 Prof. Beteille with the Research Officers Ms. Munisha Chauhan and Ms. Sudeeti Kamboj*

## 2.2. SURYAKANT BALI



*Figure 2.4 Dr. Suryakant Bali, NRP (2015)*

**Dr. Suryakant Bali** is a scholar of Indian culture and a scholar of Sanskrit. He had taught at the University of Delhi before becoming Assistant Editor (1987) of India's famous Hindi daily newspaper 'Navbharat Times'. After being the local editor of Navbharat (1994–97), he was the executive editor of Zee News. Apart from the prolific political writings, his writing on Indian culture was particularly appreciated. For a long time, India's milestones (Ravivarta, Navbharat Times) remained the most favourite column of readers. Later, it also reached the readers in the form of a book called 'Bharat Gatha' with substantial additions and changes.

Born on 9 November 1943 in Multan (now Pakistan). From Hansraj College, he earned his B.A. Honours (English), MA (Sanskrit) and then Ph.D. in Sanskrit Linguistics from Delhi University itself. After studying, he associated himself with teaching and writing. Apart from two books focused on political writing — '*The Mahaprashan of the Politics of India*' and '*Identifying the Personality of India*', Mr. Bali's three books on Indian Archaeology - '*Contribution of Bhattoji Dikshit to Sanskrit Grammar (Ph.D. Thesis)*', '*Historical and Critical Studies in the Atharvaveda (Ed)*' and Mahabharata-centric book '*Mahabharata Punarpath*' have also been published.

Shri. Bali have presented the Vedic narratives in Hindi as two novels for the first time - '*Tum Kab Aaoge Shyava*' and '*Deerghatma*'. The thought books '*Bharat Ko Samajhane Ki Sharten*' and '*Dharmasankat of Mahabharata*' started a new chapter of discourse in his life.

**Academic Research and Contributions:**



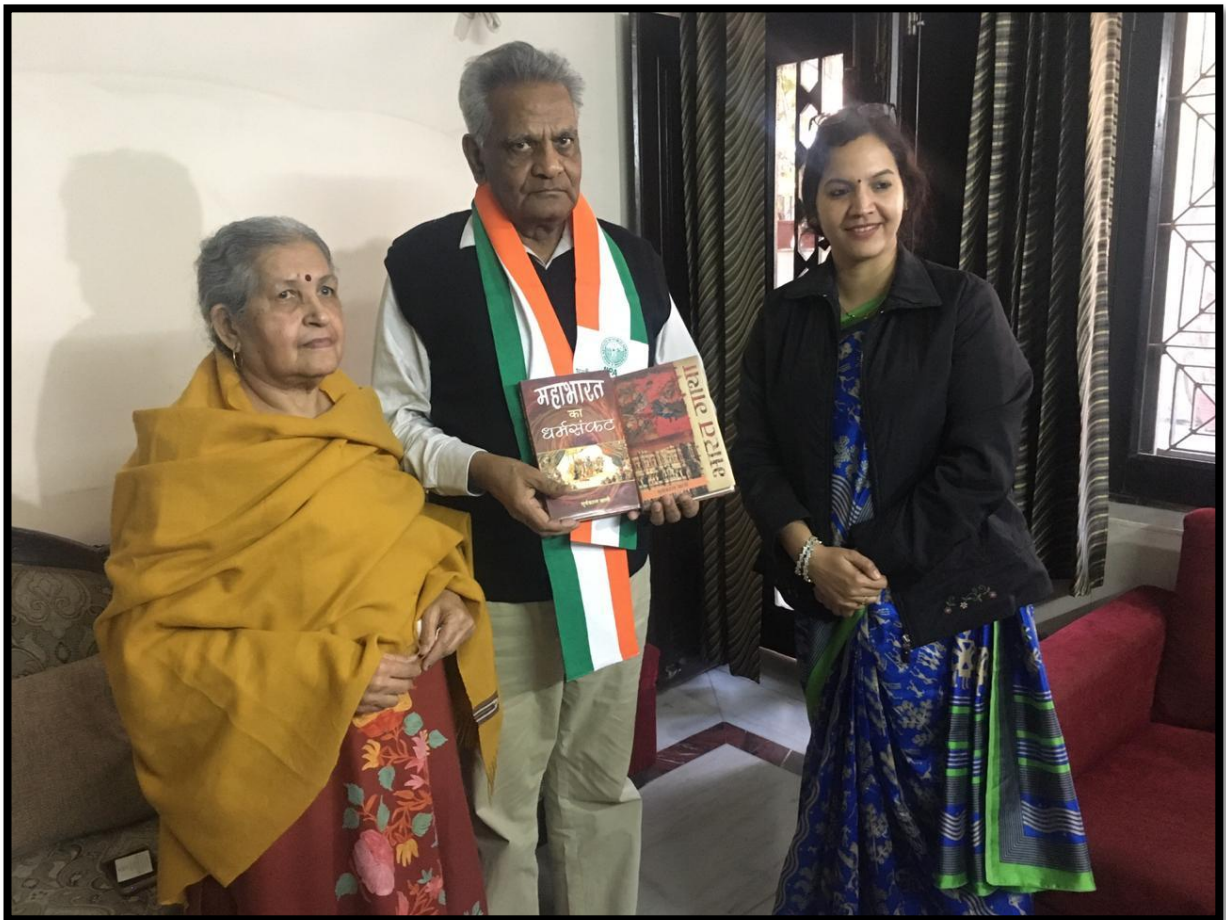
*Figure 2.5 Books written by Dr. Bali*

**List of Books published under Dr. Suryakant Bali name:**

1. **Deerghatma (2020)**
2. **Tum Kab Aaoge Shyava (2020)**
3. **Bharat Ka Dalit-Vimarsh (2019)**
4. **Bharat ki Rajneeti ka Uttarayan (2019)**
5. **Bharat Gatha (2018)**
6. **Bharat Ko Samajhane Ki Sharten (2016)**

7. **Mahabharat Ka Dhramsankat (2016)**
8. **Bharat Ki Rajneeti Ke Mahaprashn (2012)**
9. **Bharat Ke Vyaktatva Ki Pehchan**
10. **'Mahabharata Punarpath'**
11. **'Historical and Critical Studies in the Atharvaveda (Ed)' (1981)**
12. **'Contribution of Bhattoji Dikshit to Sanskrit Grammar [Ph.D. Thesis] (1976)**

### **OPINIONS OF THE NRP**



***Figure 2.6 Dr. Bali and his wife with Dr. Surabhi Pandey(Project Head, IIPA)***

#### **1. Visibility and Public Disclosure**

In Dr. Suryakant Bali's opinion NRP Scheme doesn't have public visibility as it is supposed to have since it is a National Honour. Dr. Bali, himself came to know about the scheme only after he was approached by the MHRD for the same.

## **2. Honorarium and Financial Aid**

Dr. Bali is of the opinion that there is lack of proper instructions by the MHRD regarding the use of different funds provided to the NRPs. He is of the opinion that proper information must be given regarding where and how the contingency is supposed used. Also, that contingency fund should be as per requirement of the NRP, and it should be well defined how to use it. The money should not go waste unnecessary. It is taxpayers' money.

## **3. Duties and Responsibilities**

Dr. Suryakant Bali believes that some duties and responsibilities must be there. There should be well defined set of responsibilities. And, MHRD should specify it clearly.

## **4. Involvement and contribution at university, academics of national importance**

In the view of Dr. Bali, MHRD should assign one or more university with each NRP during the selection itself. And the process should be such that both the NRP as well as the University should be informed about the official decision.

## **5. Meeting at Annual or Quarterly basis to strengthen NRP's contribution**

Dr. Bali also suggested that there should be annual meetings of all NRPS together. Which can be arranged by the Ministry

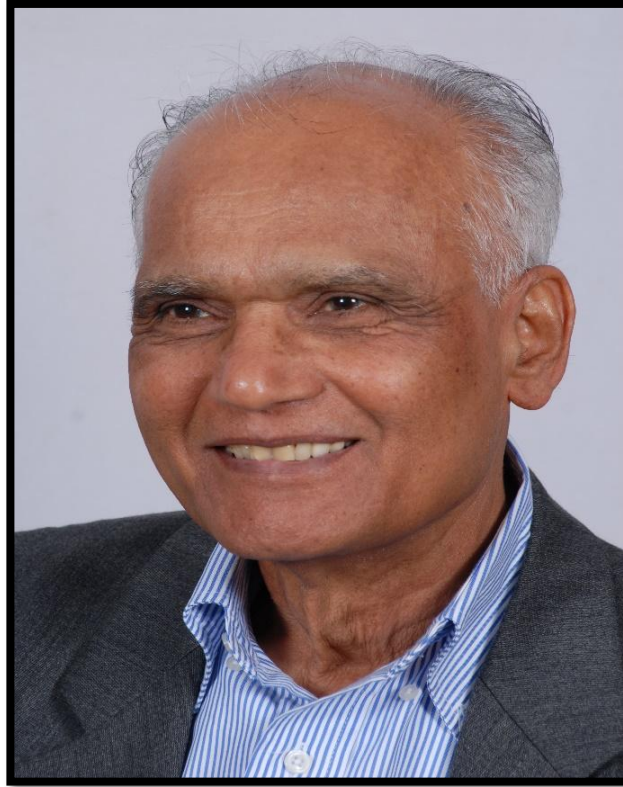
The beneficiaries should at least be asked to send regular reports and conduct meetings.

They should also be asked to certain public lectures and activities. Ministry themselves should help to organize such events.

## **6. Suggestions and recommendations for improvement of the scheme**

- There should be public disclosure and visibility of the scheme must be enhanced by the Ministry.
- Selection procedure and criteria must be well structured.
- Financial aid like contingency fund must be allocated as per the requirement of the NRP.
- There should a well-defined set duties and responsibilities.
- Annual meetings, Public Lectures and other activities must be organized by the Ministry.

### 2.3. S. L. BHYRAPP



*Figure 2.7 Dr. S L Bhyrappa, NRP (2014)*

**Dr. Santeshivara Lingannaiah Bhyrappa** is a Kannada novelist, whose work is popular in the state of Karnataka, India. Dr. S L BHYRAPP is retired Professor of Philosophy and is widely regarded as one of India's foremost modern-day writers. Some of his novels have been translated into all Indian languages including Sanskrit and English. His work focus on fundamental human predicaments, social structures, and prevailing norms. He probes into human nature and analyses love, duty and fate within a matrix of different value systems.

Dr. Bhyrappa has received all State Awards, and some of the National Awards for his works. Three of his novels made into successful films have received National Awards

Born on 20 August 1931 in Hassan district of Karnataka, Dr. S. L. Bhyrappa has authored twenty novels in a career spanning four decades. His first novel, *Dharmashree* was published in 1961.

### **Academic Research and Contributions:**

Starting with *Bheemakaya*, first published in 1958, Bhyrappa has authored twenty-four novels in a career spanning more than five decades. Shri Bhyrappa has reconstructed the *Mahabharatha* from sociological and anthropological angle, through metaphors in his novel.

Some of his famous works include- *Gatha Janma* (1955), *Bheemakaaya* (1958), *Belaku Mooditu* (1959), *Doora Saridaru* (1962), *Jalapaata* (1967). His latest novels *Aavarana & Kavalu* was sold out even before its release. The novel went on to create a record in Indian literary world by witnessing 10 reprints within five months of its release. *Vamshavruksha*, *Tabbaliyu Neenade Magane*, *Matadana* and *Nayi Neralu* have been made into films.

Shri. Bhyrappa also wrote tomes (a large book, especially one volume of a multi-volume scholarly work) pertaining to literature and philosophy such as *Satya Mattu Saundarya*, *Sahitya Mattu Prateeka*, *Kate Mattu Katavastu* and *Naneke Bareyuttene*.

### **Awards and Honours:**



*Figure 2.8 Dr. Bhyrappa with PM Narendra Modi at Book Launch*

## **List of National & State Awards received by Dr. Bhyrappa**

1. Bendre National Award (2020)
2. Padma Shri award (Government of India, 2016)
3. Sahitya Akademi Fellowship (Government of India, 2015)
4. National Research Professor, (Government of India, 2014)
5. Saraswati Samman (Birla Foundation, 2011)
6. Sahitya Akademi Award (Government of India, 1975)
7. Nrupatunga Award (2017, Kannada Sahithya Parishaththu and BMTC Bengaluru)
8. Sri Krishnadevaraya Award (Telugu Vignana Samithi, 2017)
9. Honorary Doctorate from Mysore University (2015).
10. Betageri Krishna Sharma Award (2014)
11. Vagvilasini Puraskar (Deenanath Memorial Foundation, Pune, 2012)
12. Nadoja Award (2011)
13. NTR National Award (2007).[24]
14. Honorary Doctorate from Gulbarga University (2007).[25]
15. Pampa Award (2005).[26]
16. President, Kannada Sahitya Sammelana at Kanakapura (1999)
17. Kannada Sahitya Academy award (Government of Karnataka, 1966)

## **OPINIONS OF THE NRP**

### **1. Visibility and Public Disclosure**

According to Dr. S L Bhyrappa, the scheme lack visibility in the public domain. He shared that he also came to know about the scheme only when he was approached by the MHRD regarding my selection for the post of National Research Professor.

Dr. Bhyrappa shared that he is not aware of the selection procedure and suggested that MHRD must have a clearly defined structure of the scheme.

### **2. Honorarium and Financial Aid**

Dr. Bhyrappa shared that since it is an Honor to be nominated for the post of National Research Professor in the country, the amount of money payed is not an important matter. However, the scheme lacks the required details about the utilization of the funds it provides to an NRP. Sharing his personal anecdote, he argued that he was unable to understand how the contingency fund works since for initial two years he received the amount as per his requirement but later it was obstructed sue to some reason. And he received no official communication on the matter as well.



*Figure 2.9 Dr. Bhyrappa with Dr. Surabhi Pandey and RO Munisha Chauhan at IIC*

### **3. Duties and Responsibilities**

Dr. Bhyrappa is of the view that the selected NRPs must be empaneled with some university so that their contributions and knowledge can be utilized in enriching their respective disciplinary field.

He also suggested that the Annual Progress Report submission must be considered more seriously.

### **4. Involvement and contribution at university, academics of national importance**

Dr. Bhyrappa suggested that an NRP must be empaneled with a university by the Ministry.

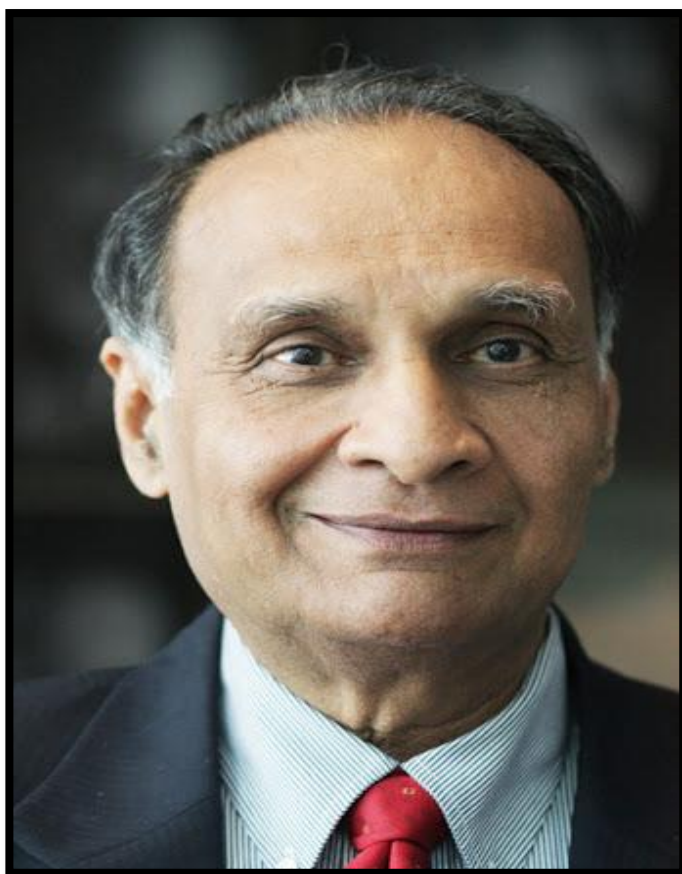
## **5. Meeting at Annual or Quarterly basis to strengthen NRP's contribution**

Dr. Bhyrappa suggested that it will well serve the government and country in general if there are meetings organized by the Ministry.

## **6. Suggestions and recommendations for improvement of the scheme**

- It should be institutionalized, like there are institutions like Sahitya Akademi. But this institution of the selection of NRPs should focus on all disciplinary fields. The institution should be run by learned scholars.
- Administrating this there must be a Committee to see through all the processes.
- NRPs must be empaneled with university so that their contribution can be extended to enrich their field.
- Annual Progress Report submission must be considered more seriously.
- Annual/Quarterly meetings must be held.

## 2.4. GOVERDHAN MEHTA



*Figure 2.10 Dr. Goverdhan Mehta, NRP (2009)*

**Prof. Goverdhan Mehta** is an organic chemist who has made valuable contributions to the field of molecular synthesis. In addition to developing synthetic pathways for numerous biologically active compounds, he is known for being the first to have created many new and exciting molecular structures.

In addition to his pioneering synthetic work, Goverdhan has conducted valuable studies on the way in which the constituent electrons of a molecule influence its structural properties — a relationship known as the stereo electronic effect. As a leading scientific figure in his home country of India, he has also devoted considerable time towards national issues of scientific education.

Prof. Goverdhan Mehta received his MSc Chemistry degree from BITS Pilani, in 1963. A PhD from Poona, he has been conferred over a dozen Honorary Doctorate (D. Sc. h. c) degrees by

universities in India and abroad. Prof. Mehta has also been the Lilly-Jubilant Chair professor, School of Chemistry, University of Hyderabad.

### **Academic Research and Contributions:**

Prof Mehta is an internationally acclaimed researcher with wide ranging research interests in organic chemistry and specializes in the design of complex molecules that blends art and architecture and has published more than 450 original research papers in international Journals of high repute. He is actively involved in national and global issues related to science policy and higher education and is an ardent advocate of quality and reforms in Indian universities.

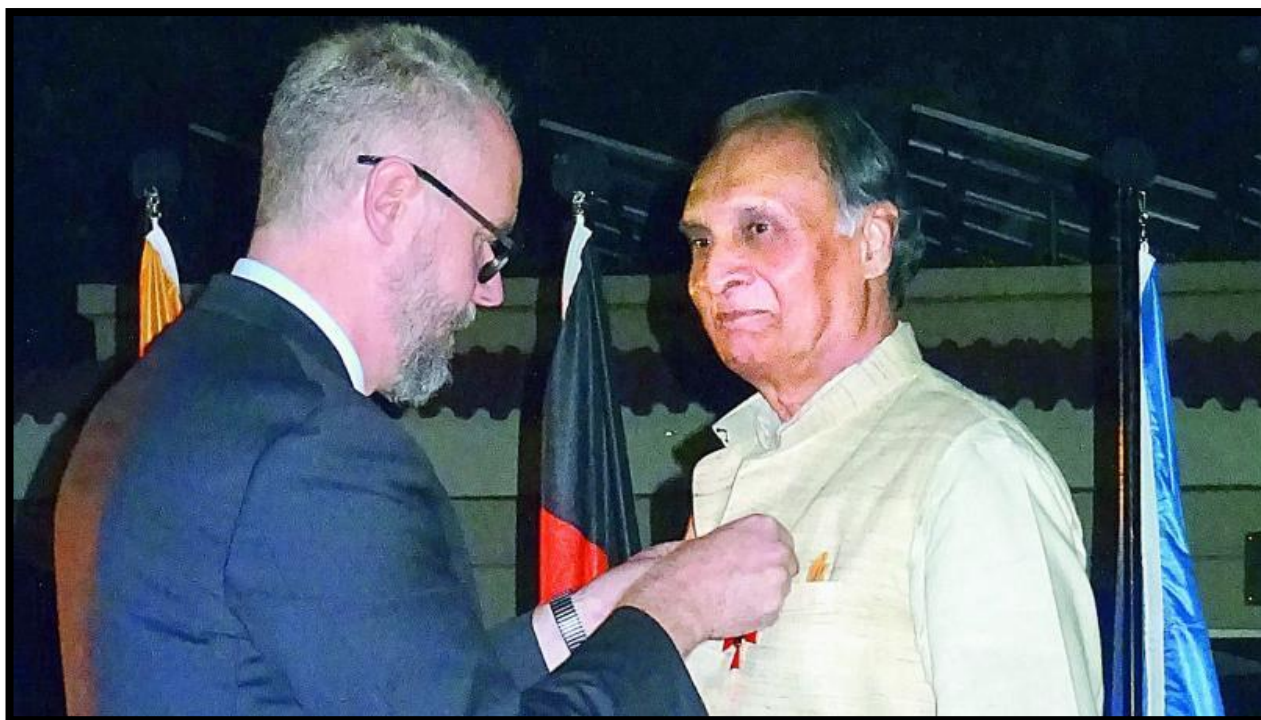
Prof. Mehta served as the **Director of the Indian Institute of Science** from 1998 to 2005 and as **Vice Chancellor of the University of Hyderabad** from 1994 to 1998, two of India's prestigious academic institutions. He has held faculty positions at the Indian Institute of Technology, Kanpur, University of Hyderabad and the Indian Institute of Science, Bangalore from 1970 to 2005 and invited to visiting Chairs in over a dozen countries. Professor Mehta was the **Srinivas Ramanujan Research Professor** of the Indian National Science Academy (1992-1997) and **CSIR Bhatnagar Fellow** (2005-2010).



*Figure 2.11 Prof. Mehta receiving his Honorary degree*

Prof. Mehta serves as *Independent Director* on the *Board of Directors* and as Member of the Research Advisory Boards of several leading Pharmaceutical and Biotech companies. The *Distinguished Alumnus Award 2011* for the category of Academic Teaching and Research is awarded to Prof. Goverdhan Mehta, in recognition of his exceptional scholastic contributions as a Researcher and Educator. Through his achievements, Prof. Goverdhan Mehta has brought glory to the name of the Institute.

### **Awards and Achievements:**



*Figure 2.12 Prof. Mehta receiving Humboldt Research Prize*

He is a recipient of over forty national and international awards that include the **Shanti Swarup Bhatnagar Prize**, **G.D. Birla Award for Excellence in Science**, **Centenary Medal of the Royal Society of Chemistry**, London, **Trieste Science Prize from TWAS (Trieste, Italy)**, **Humboldt Research Prize from Germany**, Medals from the **Indian Chemical Society**, **Indian National Science Academy** and **Indian Science Congress Association**.

He has been honoured with '**Padma Shri**' by the Government of India, and the '**Chevalier de la Legion d'Honneur**' by the President of Republic of France. Prof. Mehta is a **Fellow of the Royal Society (FRS)** and **Foreign Member of the Russian Academy of Sciences**. He has been **President of the Indian National Science Academy (1999-2001)**, **Co-Chair of Inter Academy Council (2000-2005)** and **President of International Council for Science (2005-2008)** and is actively associated with many national and international organizations.

## OPINIONS OF THE NRP



*Figure 2.13 Prof. Mehta with ROs Sudeeti Kamboj and Munisha Chauhan*

### **1. Visibility and Public Disclosure**

Prof. Mehta shared that he was aware about the scheme and about who all had been NRPs when he was being selected for the scheme. Appreciating the scheme, Prof. Mehta shared that this is an honour and therefore people relate on a higher level with it. However, one of the thing which is missing is publication of proper data on the Ministry's website about the scheme, about the NRPs (current or previous).

So, Prof Mehta suggested that the scheme should be more made public. It lacks the visibility factor.

Prof. Mehta suggested that selection process could be made transparent and more structured. The information and documents must also be made public through the website. Solicited nominations must be avoided.

There should be an advisory committee of previous NRPs. The process should become non-political at least. Prof. Mehta suggested that experts of fields should be involved not political people by making a comparison with Vice Chancellor selection process in Universities.

Previous NRPs can be in the selection committee and they can at least work on the nomination.

## **2. Honorarium and Financial Aid**

Prof. Mehta said that there should not be any comparison on monetary basis as honorarium is not a payment. It is an honour and recognition therefore it should never ever be compared with payment. He further added that a country's honour cannot be put against money. Money is a trivial matter in this context.

However, Prof. Mehta agreed that it should be increased, may be doubled in view of the current financial situation of the economy and as each NRP comes from different background there it must be increased.

## **3. Duties and Responsibilities**

The ministry must keep a record of all the NRPs work and contribution on regular basis and update the data sources. Annual Progress Report can be made compulsory.

Also, there should be an advisory committee of previous NRPs that can serve as think tanks for the government. Previous NRPs can be in the selection committee and they can at least work on the nomination.

## **4. Involvement and contribution at university, academics of national importance**

Yes, it would be beneficial for the Government itself. Government should treat NRPs as a think tank. Govt. is always short of ideas. So NRPs should be referred to brought in into the scheme. NRPs should be considered as National Assets and should always be involved in consultations of policy/schemes of the government itself.

## **5. Meeting at Annual or Quarterly basis to strengthen NRP's contribution**

No, Prof. Mehta shared that he does not agree with the idea of annual meet ups/ meetings as he believed that there may be time constrained for NRPs.

## **6. Suggestions and recommendations for improvement of the scheme**

- Good scheme and must be encouraged more.
- There should be zero political interference and zero ideological interference in the selection process.
- Well-structured and detailed information must be shared on the website about the scheme. A system of check & balance should be done there.
- Criteria for selection: visibility/ knowledge advancement should be a criteria in selection
- Disclosure about the NRP and contributions should be done. One-page synopsis/ properly worded can be put online the website.

## 2.5. P N TANDON



*Figure 2.14 Dr. P N Tandon, NRP (2014)*

**Dr. Prakash Narain Tandon** is an Indian neuroscientist and neurosurgeon born on 13 August 1928. He graduated with an MBBS and MS from the KGMC in 1950 and 52 respectively, and then trained at the University of London and obtained his FRCS in 1956. He further obtained specialist training in neurosurgery at Oslo, Norway and Montreal, Canada.

After a brief tenure as a professor at the K.G. Medical College, Lucknow (1963–65), he moved to the prestigious All India Institute of Medical Sciences, New Delhi where he founded the neurosurgery department he has been a professor of neurosurgery, a Bhatnagar Fellow (CSIR) and then a professor emeritus.

Tandon, an elected fellow of the National Academy of Medical Sciences and was the President of the Indian National Science Academy in 1991-92 and has been awarded Padma Shri (1973) and Padma Bhushan (1991) by the Government of India. Tandon also serves as the president of the National Brain Research Centre Society, Manesar, Haryana, India. He is a member of the Norwegian Academy of Science and Letters.

**Academic Research and Contributions:**

Dr. Tandon is an outstanding medical expert who combined excellent professional competence as Neurosurgeon with internationally acclaimed scientific research and played a critical role in comprehensive development of neurosciences in India. He catalyzed the establishment of National Brain Research Centre (NBRC) at Manesar under the aegis of Department of Biotechnology and became its founder President.

His major research efforts dealing primarily with neurological disorders of the nervous system, included developmental defects, head injury, subarachnoid hemorrhage, and experimental fetal neural transplant. He has authored 250 papers, over a dozen monographs and many chapters in various textbooks. He trained more than 50 neurosurgeons.

Dr. Tandon served as Member of the Governing bodies of CSIR, ICMR, UGC, Indian Council of Social Science Research (ICSSR) and Indo-US S&T Forum. He was Member, Norwegian Academy of Sciences (1987), American Association of Advancement of Science (2002), Indian Institute of Advanced Study, Shimla (Honorary Life Member), Society of Neurological Surgeons, USA (1987) (Honorary Member), Royal Society of Medicine, London (1992) (Foreign Member) and Science Advisory committees of some CSIR Labs (Chairman).

He was Founder Co-chairman of the Inter Academy Panel (IAP), Member, ICSU Review Committee. He co-edited the Textbook of Neurosurgery and acted as Consulting Editor of the Textbook: Operative Neurosurgery. He was a Member, Science Advisory Council to the Prime Minister (1986-89).



*Figure 2.15 Dr. Tandon's authored Books*

### **Awards and Honors:**

Dr. Tandon was conferred numerous awards, notably: Padma Sri (1973), Honorary Surgeon to the President of India (1977-80), BC Roy Award for Developing a Specialty (1980), MN Sen Oration by ICMR (1980), UGC National Lecturer (1982), FICCI Award for Life Sciences (1983), Jawaharlal Nehru Fellowship (1984-85), Dhanwantari Prize by INSA (1986), Outstanding Alumnus Award by KG Medical College, Lucknow (1987), OP Bhasin Award for Medical and Health Sciences (1988),

Padma Bhushan (1989), SS Bhatnagar Fellowship (1990-95), Basanti Devi Amir Chand Prize by ICMR (1991), BC Roy Award for Eminent Medical Scientist by MCI (1993), Sir CV Raman Medal (1997), GM Modi Award for Innovative Science (1998), INDO-ASEAN Eminent Persons Lecturer (1999), MN Shah Distinguished Fellow (2000-05), Firodia Award for Excellence in Science & Technology (2003), New Millennium Plaque of Honor in Medicine and Physiology (Indian Science Congress: 2002-03), Professor Bachhawat Lifetime Achievement Award by Indian Academy of Neuroscience (2003), NASI President's Gold Medal (2006), and Padma Vibhushan (2006).

He was elected President of Neurology Society of India, National Academy of Sciences (India), Allahabad, and Indian Academy of Neurosciences. He was also elected Fellow of the National Academy of Medical Sciences (Council Member and Vice-President), National Academy of Sciences (India), Allahabad, Indian Academy of Sciences, Bangalore, the Academy of Sciences for the Developing World (TWAS) and the Royal Society of Medicine. He was Secretary (1981-84), Vice-President (1989-90) and President (1991-92) of INSA.



*Figure 2.16 IIPA team with Dr. Tandon*

## **OPINION OF THE NRP**

### **1. Visibility and Public Disclosure**

In Dr. P.N. Tandon's opinion NRP is not as well-known as it should be nationally and it not known at all internationally. The scheme aim should be known to the public. Dr. Tandon got to know about the scheme as his colleague had been an NRP.

He further suggested that such a prestigious award should be better known by: -

- Widely announcing the contributions of the selected honoree in media.
- Nationally utilizing their expertise for teaching/ training, in advisory committees for policies and programs of national importance.
- There should be an annual meeting organized for all the NRP's and the MHRD to interact and to increase the awareness and usefulness of the scheme.

### **2. Financial Assistance**

The current honorarium was reasonable as it was over and above the pension and also tax-free pension, but the scheme should enable accessibility for health care facilities as the scheme is essentially provided to those above 65 years of age.

In Dr. Tandon's opinion the contingency fund should provide for some Secretarial assistance as well as travel allowances. Since this the most prestigious recognition of one's lifetime contributions of the Honoree it should not be less than other such awards recently introduced like the National Science Chair by the Department of Science & Technology.

Since the aim of the scheme is to promote and spread the culture of research in the country the NRP scheme should provide allowance to maintain car and miscellaneous expenditures like international travel for delivering a research paper, keynote speaker and attending conferences. The financial assistance needs to revise to incorporate the same.



*Figure 2.17 Dr. Tandon presenting Dr. Pandey with his Autobiography*

### **3. Roles and Responsibilities of NRP's**

The NRP is not well-known as it should be nationally, and it is not known at all internationally. Such a prestigious award should be better known by widely announcing the contributions of the selected Honoree in media, nationally utilizing their expertise for teaching/training, in advisory committees for policies and programs of national importance. These roles and responsibilities of the NRPs should be broad in principle not in constraint.

#### **4. NRP Scheme facilitation in research contribution**

The scheme has effectively assisted in furthering the contribution of the retired gems of our academia .It enabled Dr. Tandon to continue a fair amount of academic activities publishing books/monographs, deliver lectures/ oration in his field, serve on research/ administration committees of the government, specially science department and institutes.

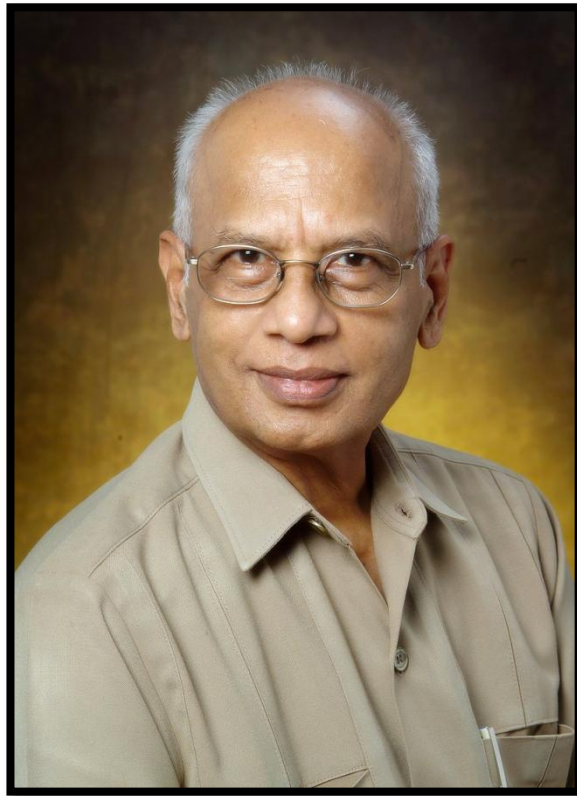
#### **5. Suggestions and recommendations for improvement of the scheme**

- The aims and objectives of the scheme should be well defined.
- The contributions of the honourees should be highlighted through press release, media coverage and associating them with an institute or university to further their contribution in the domain of their expertise.
- Revise the financial allowances and contingency fund and make it equivalent to other research scholarships running in the country like the Science Chair, Bhatnagar Scholarship, INSA.
- Broadly define the roles and responsibilities of the and attain the annual progress reports and make it public.
- Facilitation of an annual meeting for all the current honourees and the MHRD to have a discussion on the enhancement of the scheme.



*Figure 2.18 IIPA Team with Dr. Tandon*

## 2.6. M.S. VALIATHAN



*Figure 2.19 Dr. M S Valiathan, NRP (2006)*

**Dr. Marthanda Varma Sankaran Valiathan** (born 24 May 1934) is an Indian cardiac surgeon. Dr. Sankaran Valiathan received his MBBS (1956) from Kerala University and postgraduate training in surgery leading to FRCS and master's degree in Surgery from the University of Liverpool, UK. Subsequently, he specialized in cardiac surgery at Johns Hopkins and Georgetown University Hospitals in USA and became a Fellow of the Canadian Royal College in Cardiovascular and Thoracic Surgery.

He received Honorary Doctorates from several universities. He was Professor of Cardiac Surgery and Director during his stay at the Sree Chitra Institute (1974-94) and served as the first Vice-Chancellor of the Manipal University.

### **Academic Research and Contribution:**

At Johns Hopkins, Dr Valiathan worked with Dr Vincent Gott who had discovered the thrombo-resistant property of surfaces coated sequentially with graphite, benzalkonium chloride and heparin (GBH). He carried out detailed studies on prosthetic thrombosis and the GBH surface which was the first biomaterial to be made with wall-bonded heparin for clinical applications. He developed a GBH-coated shunt for resecting aneurysms of the thoracic aorta, which obviated

left heart bypass and greatly simplified the procedure. While at the Sree Chitra Institute, he organized a multi-disciplinary group of scientists, engineers and surgeons and successfully developed a biomaterials research program with emphasis on the development of medical devices.

In less than ten years, his group developed and successfully transferred for production a series of high-tech devices such as tilting disc heart valve, oxygenator, blood bag, etc., which laid the foundation for a modern medical devices industry in India.

More recently, he has conceptualized and organized several studies on a science initiative in Ayurveda among a network of major institutions across India. These studies in biology take their cues from traditional medicine, such as the genomic basis of doshaprakriti, effect of rasayanas on the genomic stability of neurons and astrocytes in rat brain and on several biological parameters of drosophila. Apart from regular surgical work, he trained over 20 cardiac surgeons, published over 100 scientific papers, three books and several chapters in books.

Professor Valiathan set up the Sree Chitra Tirunal Institute of Medical Sciences and Technology in Thiruvananthapuram, which became an institution of national importance by an Act of Parliament during his tenure. Its tertiary hospital and laboratories for biomedical engineering were instrumental in promoting the joint culture of medicine and technology. As the first Vice-Chancellor of Manipal University, he contributed to its rapid growth including the setting up of a new Life Sciences Centre. He also served on the INSA Council (1991-93). He was INSA's Vice-President (1997-99) and President (2002-04).



*Figure 2.20 Dr. Valiathan being honoured at an event*

## **Awards and Honours:**

Professor Valiathan received the prestigious award Padma Vibhushan in 2005. He was bestowed Hunterian Professorship of the Royal College of Surgeons of England, RD Birla Award, Om Prakash Bhasin Award, Jawaharlal Nehru Award, Dhanvantari Prize, Aryabhata Medal, JC Bose Medal, GM Modi Award, HK Firodia Award, and Basanti Devi Amir Chand Prize, Dr Samuel P. Asper Award of the Johns Hopkins University School of Medicine and Chevalier in the order of 'palmes académiques' of the French Government.

He was elected Fellow of the Indian Academy of Sciences, Bangalore, National Academy of Sciences (India), Allahabad, National Academy of Medical Sciences, Indian National Academy of Engineering, the Academy of Sciences for the Developing World, Royal College of Physicians of London and the American College of Cardiology.

## **OPINIONS OF THE NRP**

### **1. Visibility and Public Disclosure**

Dr. Valiathan first heard about CV Raman being made NRP in 1950s when he was a medical student in Thiruvananthapuram. In his opinion there should be an eligibility criteria for the NRP as it is a prestigious scheme and should be awarded only to those who have done excellent work in their fields, but there should not be any application procedure as it is a honour. He quoted "The originators of the scheme made a statement on eligibility by awarding the first Professorship to Sir C.V. Raman." which itself sets the expectations for the eligibility.

Many Departments of the Government have set up similar Professorships with equal emoluments and their own eligibility criteria. This has to some extent, diminished the visibility of National Research Professorship (NRP). The bar and facilities for NRP should therefore be raised as put ahead of present standards.

### **2. Financial Aid and Honorarium**

In Dr. Valiathan opinion the current honorarium, pension and contingency funds have remained static for many years while cost of travel, of living, of books, of attending conferences etc., have gone up considerably hence, there is a strong case for considering upward revision under all three categories.



*Figure 2.21 Dr. Valiathan receiving Padma Vibhushan*

### **3. Duties and responsibilities**

As per Dr. Valiathan given the age and eminence of the NRPs, it is inappropriate to give them assignments. One can only indicate that India expects to receive tangible contributions from them in their area – creative writing, new art forms, scientific discoveries, innovative institutions of learning and so on which would bring renown to India and benefit to our society.

but he strongly believes that it should be mandatory for the NRPs to submit annual reports on work done including achievements and difficulties encountered as NRPs are supported by Government grants from taxpayer's money.

### **4. Involvement and contribution at university, academics of national importance**

The scheme has helped to further his contribution in medical sciences as the Award of NRP was conveyed to him the same year for a period of 5 years. The previous year, I had been awarded the Padma Vibhushan. The tide up to make him work hard to develop the novel idea of Ayurvedic Biology into an emerging branch of biological sciences based on cues from the concepts and procedures of Ayurveda.

The following list of events in the next 10 years is illustrative:

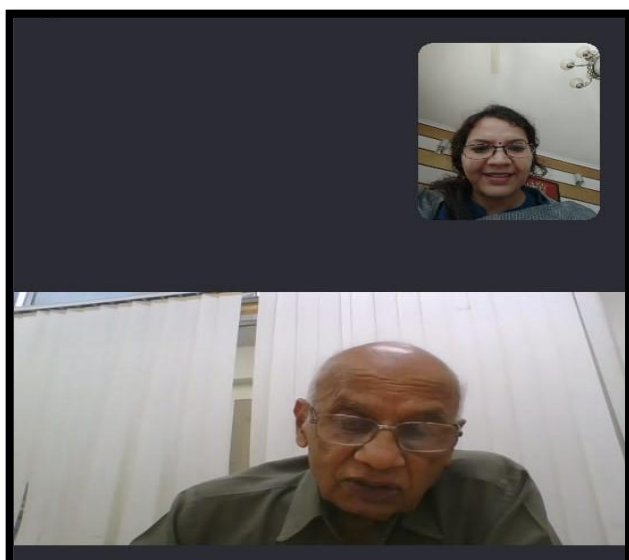
Setting up a new Programme “A Science Initiative in Ayurveda (ASIIA) to support research in “Ayurvedic Biology”, On the basis of published scientific work, ASIIA was taken over by Department of Science and Technology (DST) in 2010 with the same objective and termed a “Task Force in Ayurvedic Biology” under the Chairmanship of Professor M. S. Valiathan.

ASIIA and Task Force supported research projects jointly done by scientific and Ayurvedic institutions across India. Over 25 publications in top journals including two in Nature Reports resulted from the projects.

#### **5. Meeting at Annual or Quarterly basis to strengthen NRP's contribution.**

In Dr. Valiathan opinion the conference would not serve any specific purpose, but he believes in a broad classification such as “Natural Sciences and Liberal Arts”.

This would facilitate the selection of senior nominees at 70 years who may have spent their life time in specific areas such as mathematics, medicine, philosophy or music for example and who are active and ready to use their experience and create something transcending their specific area; or review their past experience innovatively for the benefit of the society.

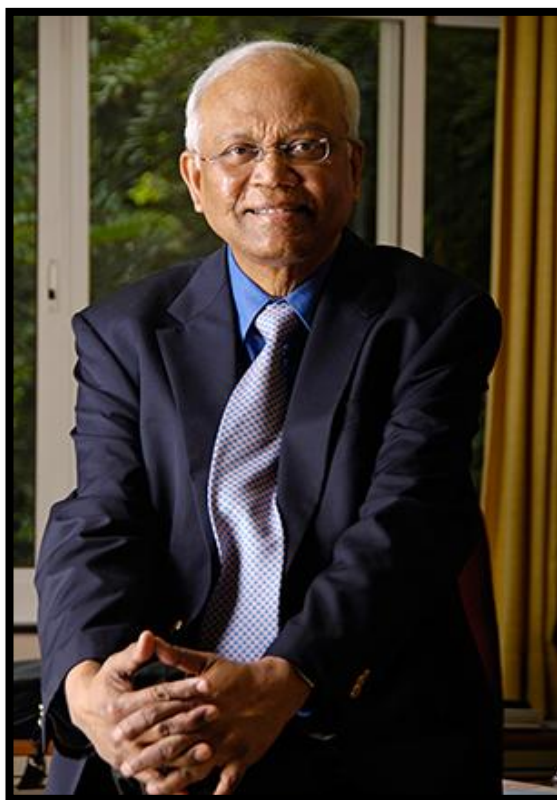


*Figure 2.22 Skype call with Dr. Valiathan*

#### **6. Suggestions and recommendations for improvement of the scheme**

- For greater transparency, a list of eligible nominators for NRP should be prepared and notified by MHRD at intervals of say, 3 or 5 years. The list should consist of say, 10-12 eminent individuals who should be largely ex-officio for e.g. Chairman, UGC; President, Indian National Science Academy; President, Sahitya Academy etc.
- At the end of tenure, NRP should produce a publishable record (book, film, institution, for example) of the work done; he/she should also be invited to give an NRP lecture in a major University based on the work done.
- At any time, the total 4 number of NRPs should not exceed a reasonable number say, twelve. What is prolific is regarded lightly. To quote Lincoln “It is dearness only that gives everything its value”.

## 2.7. R A MASHELKAR



*Figure 2.23 Dr. R A Mashelkar, NRP (2011)*

**Dr. Raghunath Anant Mashelkar** is one of India's most eminent scientists. He is known for his contributions to India's National Chemical Laboratory and Council of Scientific & Industrial Research, multiple 'Mashelkar Committees', and a successful campaign against foreign patents on Indian traditional knowledge. His mantras of 'Inclusive Innovation', 'More from Less for More', and 'Gandhian Engineering' have been a constant source of inspiration for corporates and youth alike.

Born on 1st January 1943 in Mashel, Goa, Ramesh (as he is known to his near and dear) lost his father at the tender age of six. However, his mother Late Mrs. Anjani Mashelkar was committed to doing the best she could for him. It was her determination and foresight that pushed them to move to Mumbai in search of a better livelihood and education. Here they lived in a chawl (a type of shared tenement) and often struggled to make ends meet. He went barefoot to a municipal school and would sometimes be unable to afford a notebook to write his answers in. However, he demonstrated excellence even amidst adversity. He was the brightest student in the school and continuously excelled in his academics.

Motivated by the bright future for the chemical industry in India, he joined UDCT (Now Institute of Chemical Technology), Mumbai to pursue his bachelor's degree in Chemical Engineering. After earning his degree, he had the option to go abroad to pursue his master's degree with a generous scholarship. Instead, he decided to continue his work at UDCT as a postgraduate under the mentorship of Prof. MM Sharma in the area of mass transfer in chemical reactions. He went on to complete his PhD under the guidance Prof. Sharma, finishing his thesis in just three years. His outstanding work earned him a fellowship at Salford University. Here, his guide encouraged him to work in an unrelated field – rheology. Dr. Mashelkar took up the challenge and over time, he made a name for himself as a distinguished Indian researcher.

### **Academic Research and Contributions:**

Eminent scientist Dr. Raghunath Anant Mashelkar is one of twelve Indian National Research Professors at National Chemical Laboratory (NCL) and the President of Global Research Alliance. Dr. Mashelkar served as the Director General of Council of Scientific and Industrial Research (CSIR) - a network of thirty-eight laboratories with about 20,000 employees - for over eleven years. Prior to this, he was the Director of the NCL for six years. A chemical engineer from UDCT (Now Institute of Chemical Technology), Mumbai, he was also the President of Indian National Science Academy and the President of Institution of Chemical Engineers, UK. Throughout his stellar career, Dr. Mashelkar has made indelible contributions to India, inspiring millions in the process.



*Figure 2.24 Dr. Mashelkar with Late. PM Rajiv Gandhi*

Mashelkar has played a critical role in shaping India's science and technology policies. He was a member of the Scientific Advisory Council to the Prime Minister and of the Scientific Advisory Committee to the Cabinet set up by successive governments. He has chaired twelve high powered committees to investigate issues as diverse as overhauling the Indian drug regulatory system, reviewing the state of Regional Engineering Colleges and preparing a National Auto Fuels Policy.

As an expert in restructuring public R&D institutions, he has made contributions across the world – from South Africa to Croatia. When Dr. Mashelkar took over as the Director General of CSIR, he enunciated 'CSIR 2001: Vision & Strategy'. This was a bold – and the first ever – attempt to draw out a corporate - like R&D and business plan for a publicly funded R&D institution. This initiative transformed CSIR into a user focused, performance driven and accountable organization. This process of transformation has been hailed as one of the ten most significant achievements of Indian Science and Technology in the twentieth century.

**Other Contributions:**

He initiated the visionary campaign that enabled awareness of Intellectual Property Rights (IPR) has grown amongst Indian academics, researchers and corporates. He spearheaded the successful challenge to a US patent on the use of turmeric for wound healing, as well as another patent on Basmati rice.



*Figure 2.25 Dr. Mashelkar initiated the IPR campaign*

Awards and Honours:



*Figure 2.26 Dr. Mashelkar being Awarded by Former President Shri. Pranab Mukherjee*

The President of India honored Dr. Mashelkar with Padma Vibhushan (2014), Padma Bhushan (2000) and Padma Shri (1991), three of the highest civilian honors, in recognition of his contribution to nation building.



*Figure 2.27 Dr. Mashelkar receiving the award*

Dr. Mashelkar has won over 50 awards and medals, which include S.S. Bhatnagar Prize (1982); Pandit Jawaharlal Nehru Technology Award (1991); G.D. Birla Scientific Research Award (1993); Material Scientist of Year Award (2000); IMC Juran Quality Medal (2002); HRD Excellence Award (2002); Lal Bahadur Shastri National Award for Excellence in Public Administration and Management Sciences (2002); World Federation of Engineering Organizations (WFEO) Medal of Engineering Excellence, Paris (2003); Lifetime Achievement Award by Indian Science Congress (2004); the Science Medal by the Academy of Science for the Developing World (2005); Ashutosh Mookherjee Memorial Award by Indian Science Congress (2005); and many more.



*Figure 2.28 Dr. Mashelkar at an Award ceremony*

## **OPINIONS OF THE NRP**

### **1. Visibility and Public Disclosure**

Dr. Mashelkar got a letter from MHRD regarding NRP. In Dr. Mashelkar Opinion the visibility of NRP is very low. These are the most prestigious honour. To increase visibility we need to put those names forward who's contribution are at par excellence and their names are so well known that their addition to the NRP glorifies the name of National Research Professorship scheme and it becomes a dream of every individual in research to receive such honour.

We should enhance the number and make it more than 10 honourees in a year. The visibility can be increased if the highest authorities meet the scholars at annual meetings, their work is glorified by making mini clips of their contribution, struggle of their life and work to inspire the young generation by designing an online portal at MHRD website.

## **2. Financial Aid and Honorarium**

The scheme started in 1951, at that time the honorarium was Rs. 1000. It had been 71 years to it. Under the pay rule of central government employees, in every seven years we double the salary. So, if we go by that equation, the honorarium should be 10 lakhs. In 1951 it was fixed at 5 times more than the average professor's salary and now it is given as 1/3rd of the average professor's salary. After all we are supporting only 10 professor and the same rule should be applicable in present times. The book's publication requires 5 Lakhs considering the level of research undertaken by each professor so it should in lines with the principle of present standard in other respectful scheme.

## **3. Significance of NRP and their roles and responsibilities**

The National Research Professor's activity should be put forward through annual reports. The NRP's should be given roles to provide mentorship to the young generation and young scholars. Their wisdom, experience and excellence should be utilized to boost the work of young generation by putting forth their own experience and suggestions. In addition to this Dr. Mashelkar believed that the honorees shouldn't be put on any council or committee as this will draw fossils out of them.

## **4. Meeting at Annual or Quarterly basis to strengthen NRP's contribution.**

Annual meetings would be a good idea. Since there are usually not more than 12 people, mostly around 10 people. The HRD ministry should be organising a massive campaign and event where these honourees are provided a platform to meet the Prime Minister, President or the MHRD minister in terms of strengthening the intellectual powers of India.



*Figure 2.29 Video Conferencing Dr. Mashelkar with IIPA Team*

## **5. Suggestions and recommendations for improvement of the scheme**

- There have been only 7% of women as NRP since 1951. These figures need to go up. More opportunities should be provided to women.
- In terms of excellence, the benchmark must very high. These honors should be given to those who have already been awarded with international and national honors of highest prestige.
- The national Professors should feel pride in their affiliation, and they should mention national research professor on top. so that the National Research Professorship gets its due credits and importance.

**CHAPTER 3**  
**DATA ANALYSIS AND FINDINGS**

### **3. DATA ANALYSIS AND FINDINGS**

#### **3.1. DATA COLLECTION AND ANALYSIS**

A thorough evaluation of the NRP scheme required a mixed methodology approach to analyze all the data collected by the IIPA team. The data collection was carried out using both primary and secondary research methods.

##### **1. Collection of Secondary Data**

The study team collected secondary information from the following sources: -

- a) Official website of MHRD
- b) Copies of relevant documents provided by the Ministry
- c) NRP Scheme Guidelines, Project status, and updated notifications related to scheme.

##### **2. Collection of Primary Data**

Primary data was collected from the NRPs in the form of questionnaires. Data was collected from seven NRPs through telephonic conversations as well as personal interviews.

For collecting primary data, the following modes were applied:

- a) Case Study and Interview Schedule
- b) Literature Review and Observations

##### **3. Process steps of Evaluation study**

The study evaluated the NRP Scheme, its progress and prospects since the inception of the Scheme in 1949.

The following process steps were carried out to study this Scheme:

##### **4. Identification of the Scheme**

The scheme guidelines and documents provided by the MHRD were analysed and study parameters were formulated. Based on the parameters the questionnaire was prepared and data was collected through the case study and personal interview methodology.

## 5. Designing of Questionnaires

Following parameters were taken into consideration for the evaluation study:

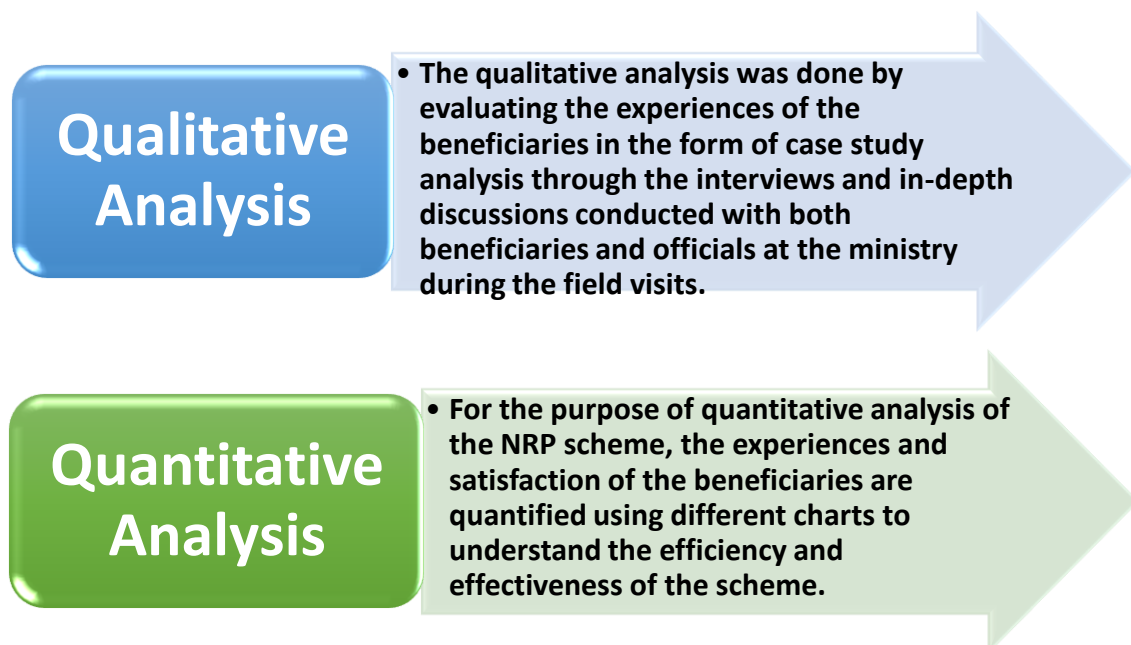
- i. Visibility of the Scheme
- ii. Financial Aid
- iii. Duties and Responsibilities of NRPs
- iv. Annual/Quarterly Meetings of NRPs
- v. Number of Field/Discipline-wise and Yearly Appointments
- vi. Selection Procedure of the NRPs
- vii. Other Suggestions and Recommendations

## 6. Field Visits and Personal Interview

Details are provided in the Chapter 2.

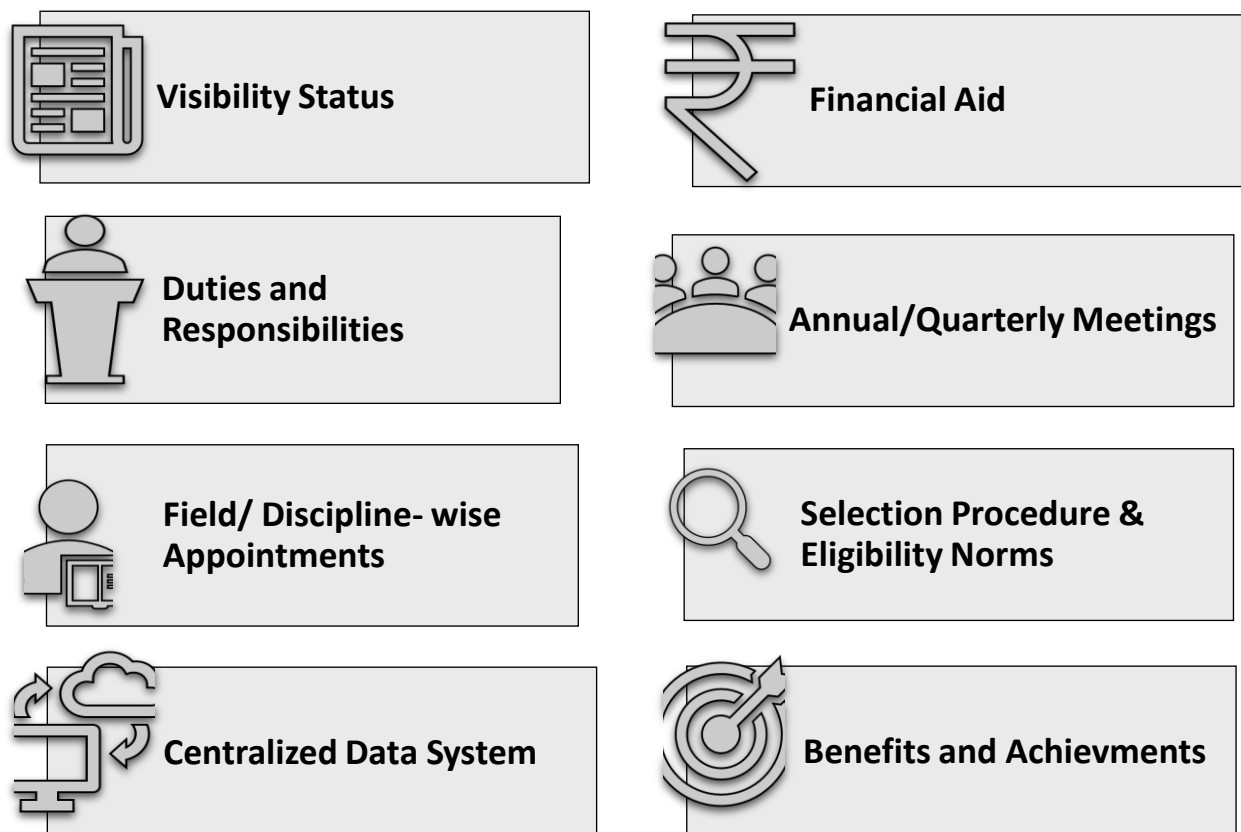
## 7. Data Analysis

The Mixed Methodology used for evaluation of the scheme in the study was as following:



*Figure 3.1 Mixed Methodology Approach*

Based on both, the Qualitative and Quantitative analysis, the following themes were identified:



*Figure 3.2 Parameters of Analysis*

### 3.2. DATA SET

For the purpose of evaluating the functioning and efficiency of the NRP scheme, Last Nine NRPS who are now NRP pensioners were contacted through telephonic conversation and email for an in person interview at their respective residence to get a holistic view of the effectiveness of the scheme. The following NRPs were contacted within the stipulated time of two months of the study:

*Table 3.1 List of NRPs approached by IIPA Team*

S. NO.	Name of the Beneficiary	Location
1	Dr. Jayant Kumar Ray	Kolkata
2	Dr. Suryakant Bali	New Delhi
3	Dr. S.L. Bhyrappa	Mysore
4	Dr. Ashok Gajanan Modak	Mumbai
5	Dr. P.N. Tandon	New Delhi
6	Dr. M.S. Valiathan	Manipal
7	Dr. R.A Mashelkar	Pune
8	Dr. Andre Beteille	New Delhi
9	Dr. Govardhan Mehta	Hyderabad

*Table 3.2 List of NRPs who responded to IIPA Team*

S. NO.	Name of the Beneficiary	Location
1	Dr. Suryakant Bali	New Delhi
2	Dr. S.L. Bhyrappa	Mysore
3	Dr. P.N. Tandon	New Delhi
4	Dr. M.S. Valiathan	Manipal
5	Dr. R.A. Mashelkar	Pune
6	Dr. Andre Beteille	New Delhi
7	Dr. Govardhan Mehta	Hyderabad

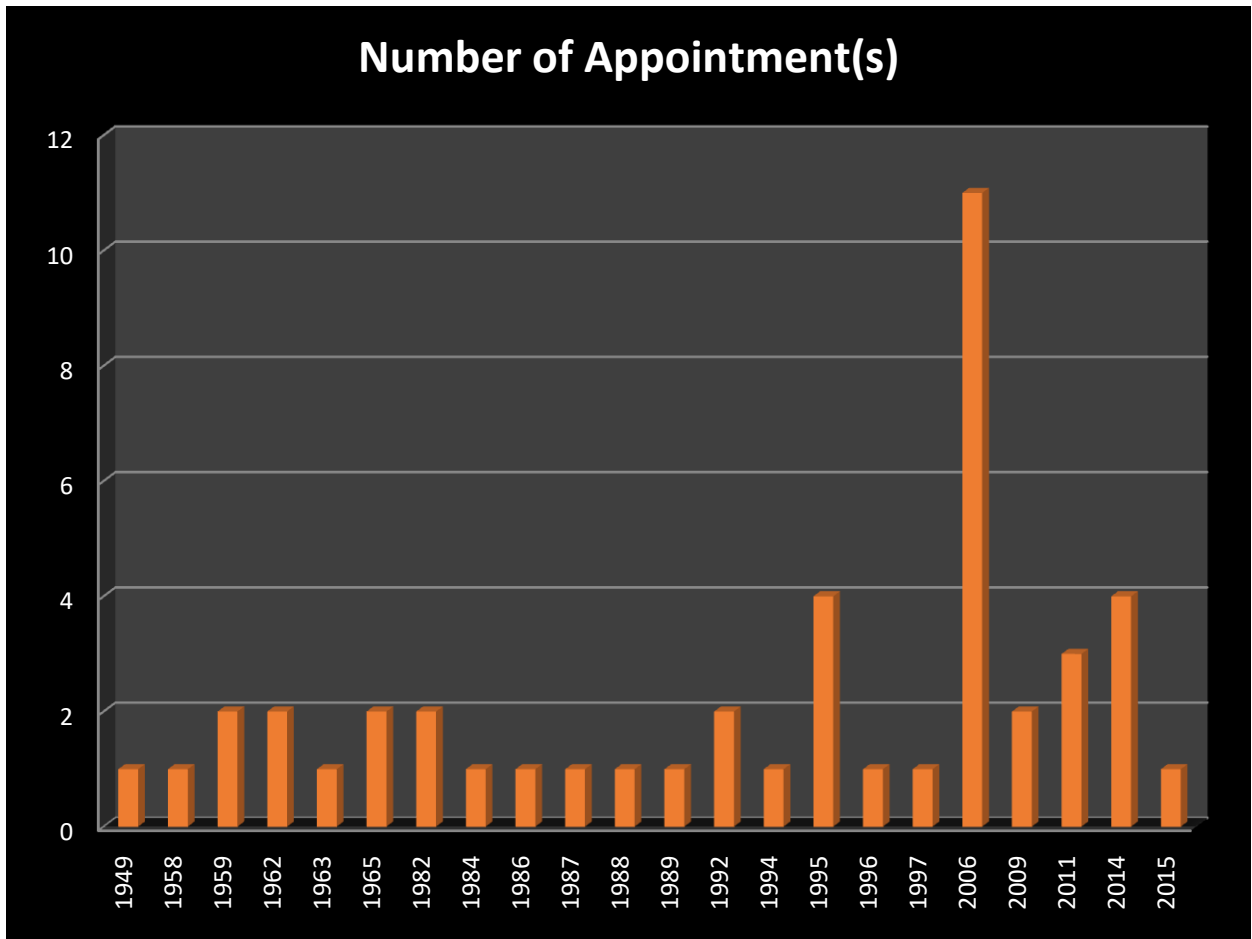
### 3.3. DATA FINDINGS AND INTERPRETATION

#### 1. YEAR WISE APPOINTMENTS SINCE 1949

*Table 3.3 Year-wise details of no. of NRPs Appointment(s)*

S. No.	Year	No. of NRP Appointment(s)
1.	1949	1
2.	1958	1
3.	1959	2
4.	1962	2
5.	1963	1
6.	1965	2
7.	1982	2
8.	1984	1
9.	1986	1
10.	1987	1
11.	1988	1
12.	1989	1
13.	1992	2
14.	1994	1
15.	1995	4
16.	1996	1
17.	1997	1
18.	2006	11
19.	2009	2

20.	2011	3
21.	2014	4
22.	2015	1



**Figure 3.3** Chart representing Year-wise number of NRP appointment(s)

The above Table 3.3 and Figure 3.3 are representation of the appointments made under the NRP scheme on year by year basis since its inception in 1949. The data reflect an irregular pattern of appointments made through the years since 1949. The pattern is also reflective of a lack of framework and a standard timeline followed by the appointment committee of the Ministry.

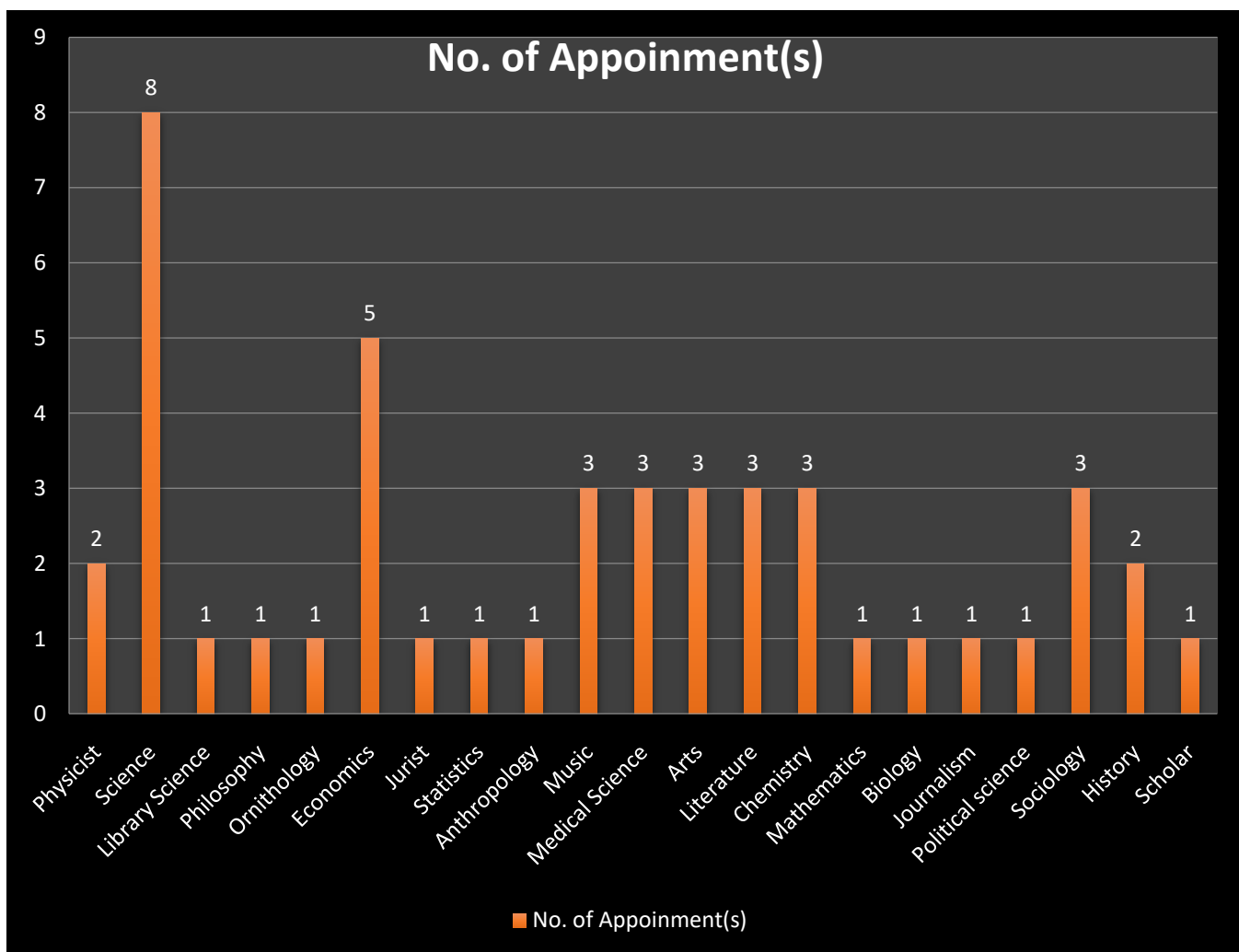
There is a need to formulate a procedure and a timeline for the NRP scheme in order to effectively achieve its desired goal of encouraging the intellectual and talented personalities of the country.

## 2. DIFFERENT AREA WISE APPOINTMENTS SINCE 1949

*Table 3.4 Details of Specialization wise NRP Appointments*

S. No.	Area of Specialization	No. of Appointments
1	Physicist	2
2	Science	8
3	Library Science	1
4	Philosophy	1
5	Ornithology	1
6	Economics	5
7	Jurist	1
8	Statistics	1
9	Anthropology	1
10	Music	3
11	Medical Science	3
12	Arts	3
13	Literature	3
14	Chemistry	3
15	Mathematics	1
16	Biology	1
17	Journalism	1
18	Political science	1
19	Sociology	3
20	History	2

The above Table 3.4 highlights the number of appointments made in different areas of specializations under the NRP scheme since its inception. The data emphasize a stark difference of appointments made in different specialised areas. The data highlights that certain disciplinary fields have not been considered even once for selection of an NRP in the country.



**Figure 3.4** Chart representing the number of appointments made discipline wise

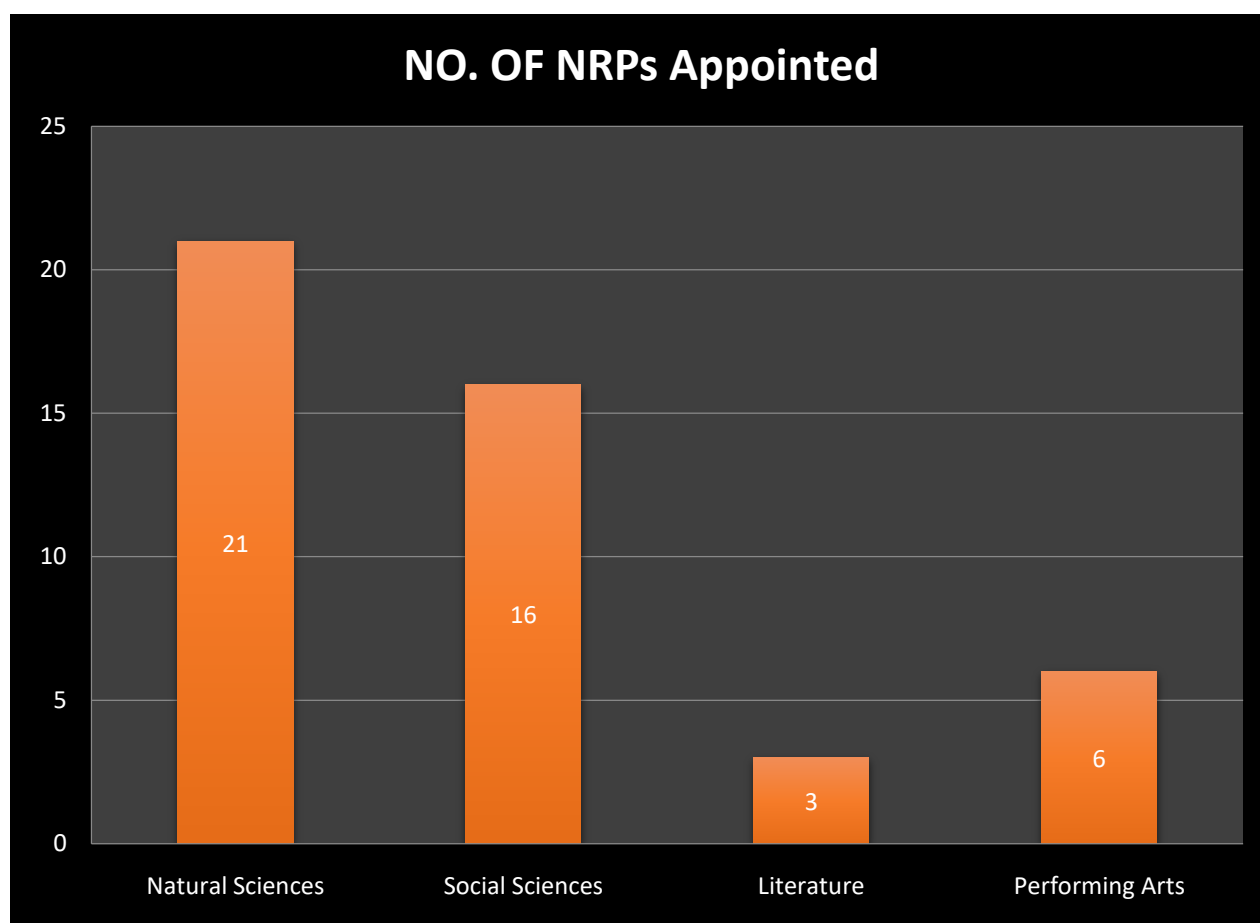
The above Figure 3.4 is also representational of the number of appointments made in different fields of specialization through the years under the scheme since 1949. Certain areas of specializations have received more focus than the others.

Some of the areas of specialization for e.g. areas like ‘Physics’, ‘Biology’ and ‘Chemistry’ are a subset of the area ‘Science’ while some areas have many different subset under them, but they have not been specified. For e.g. Literature and Arts are a broad field and there are many distinct areas of specializations under them as well. Hence the details of NRP appointments needs to be formulated with a methodology to cover a broad range of specializations in the country.

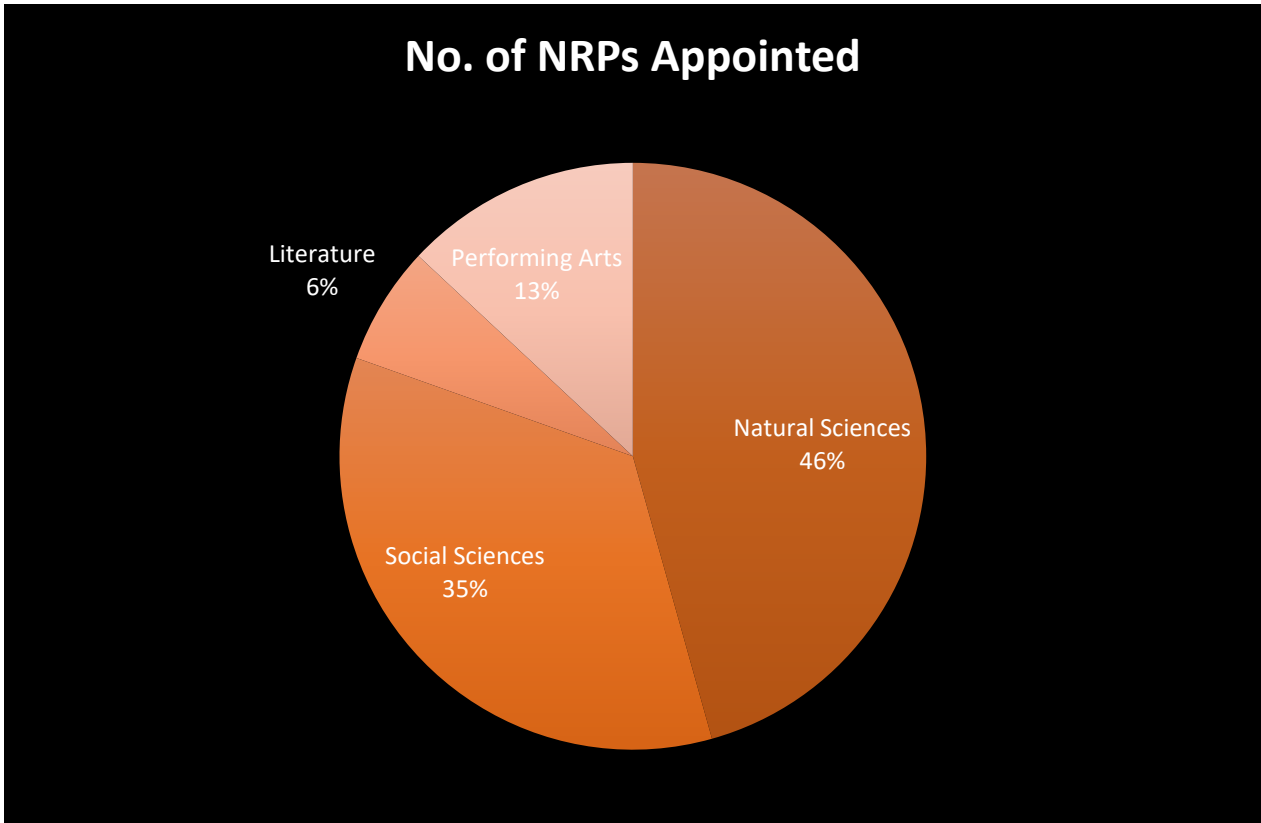
### 3. DIFFERENT FIELD WISE APPOINTMENTS SINCE 1949

*Table 3.5 Field-wise no. of NRP appointment(s)*

S.NO.	Fields	No. of NRPs appointed
1.	Natural Sciences	21
2.	Social Sciences	16
3.	Literature	3
4.	Performing Arts	6



*Figure 3.5 Field wise number of NRP appointments*



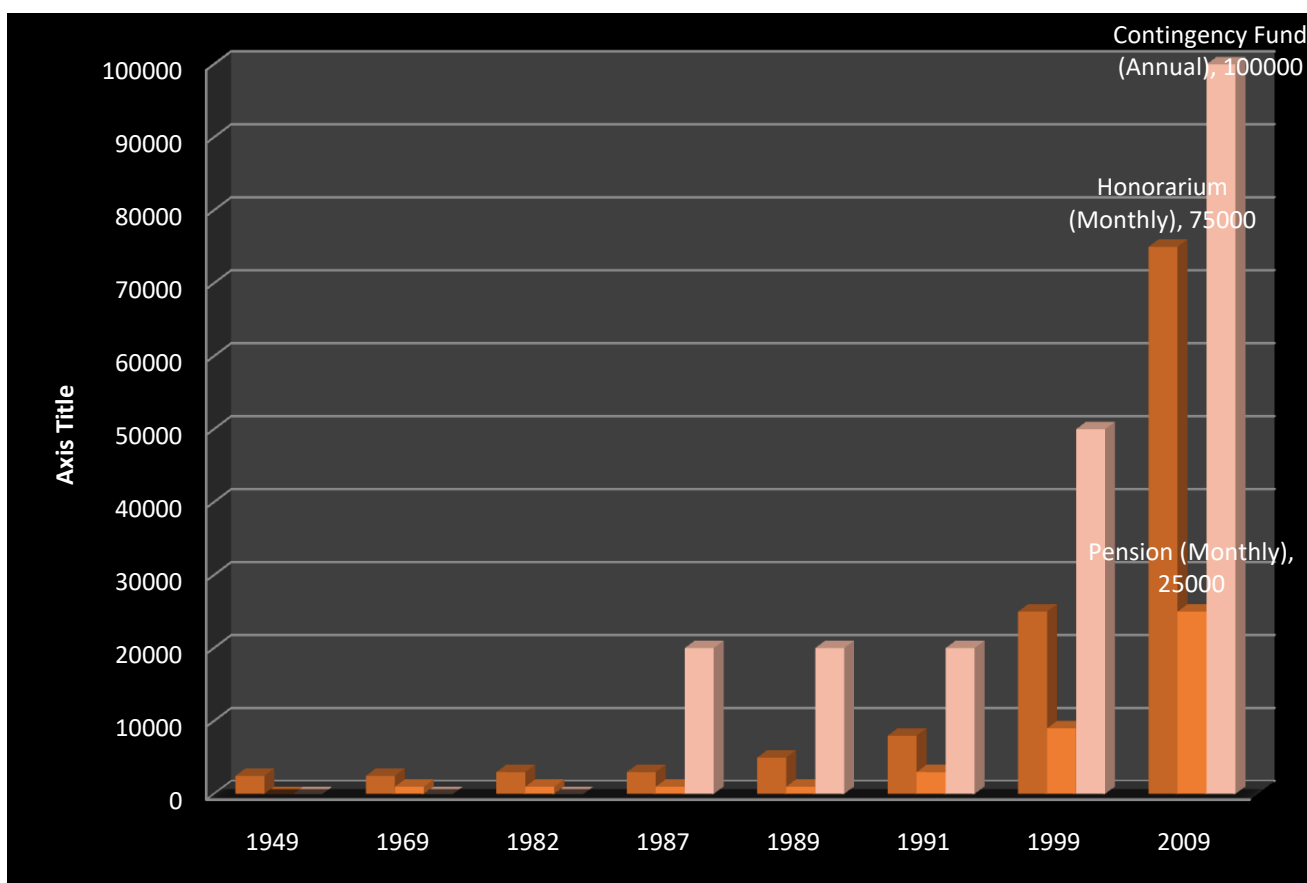
*Figure 3.6 Field wise number of NRP appointments (Pie-Chart)*

The above data represented through the Table 3.5, Figures 3.5 and 3.6 signify field wise appointments of NRPs made under the scheme since 1949. The data depicts that 46% belongs to natural science, followed by 35% social sciences, literature 6% and performing arts 13% respectively.

#### 4. FINANCIAL AID INCREMENT PATTERN SINCE 1949

*Table 3.6 Year-wise Financial Assistance Increment Details*

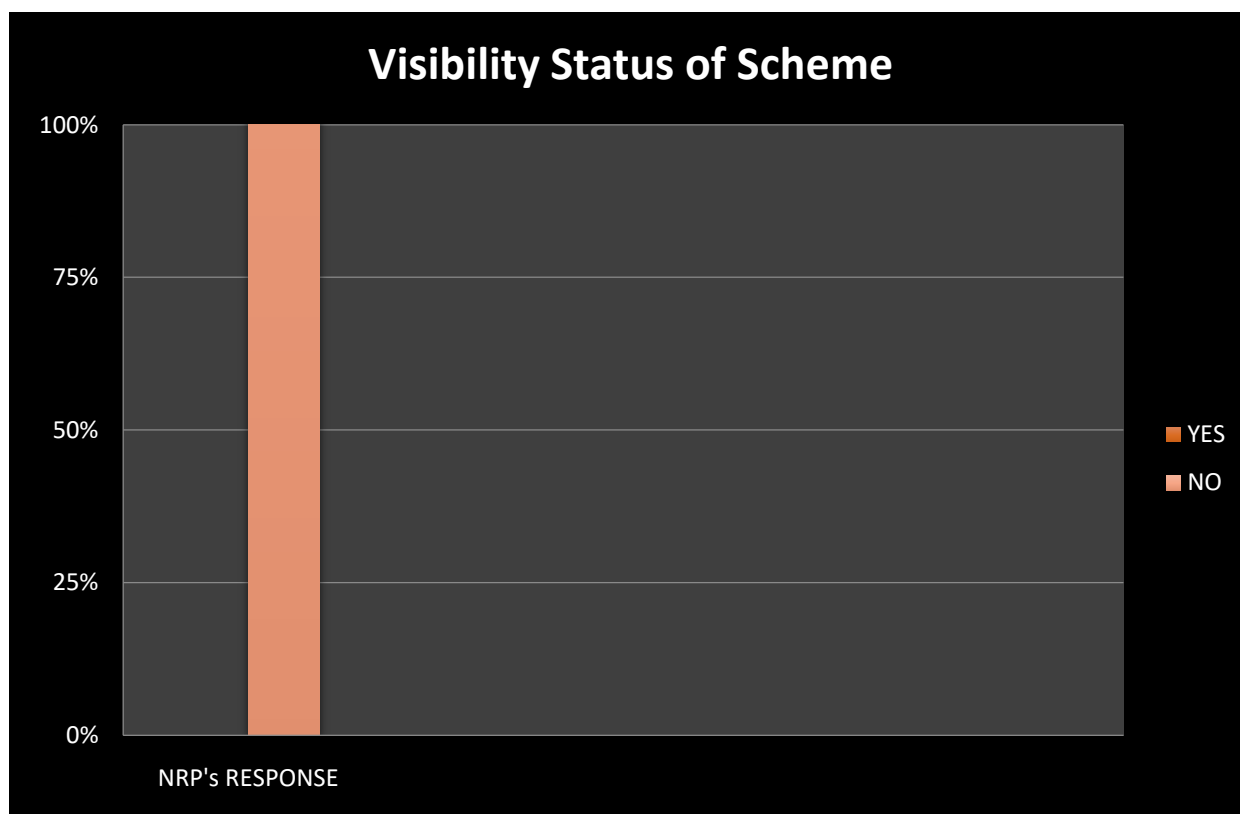
S. No.	Year	1949	1969	1982	1987	1989	1991	1998-1999	2009
1.	Honorarium (Monthly)	2500	2500	3000	3000	5000	8000	25,000	75,000
2.	Pension (Monthly)	N/A	1000	1000	1000	1000	3000	9000	25,000
3.	Contingency fund (Annual)	N/A	N/A	N/A	20,000	20,000	20,000	50,000	1,00,000



*Figure 3.6 Year wise Financial Assistance Increment Pattern*

The above Table 3.6 and Figure 3.7 represents the data regarding the Financial Emoluments provided to the NRPs under the scheme since 1949. The data highlights an irregular pattern in the increment of the different financial funds provided throughout the years. This needs to consider for revision on the same lines as the Pay Commission guidelines suggests.

## 5. VISIBILITY AND PUBLIC DISCLOSURE OF NRP SCHEME

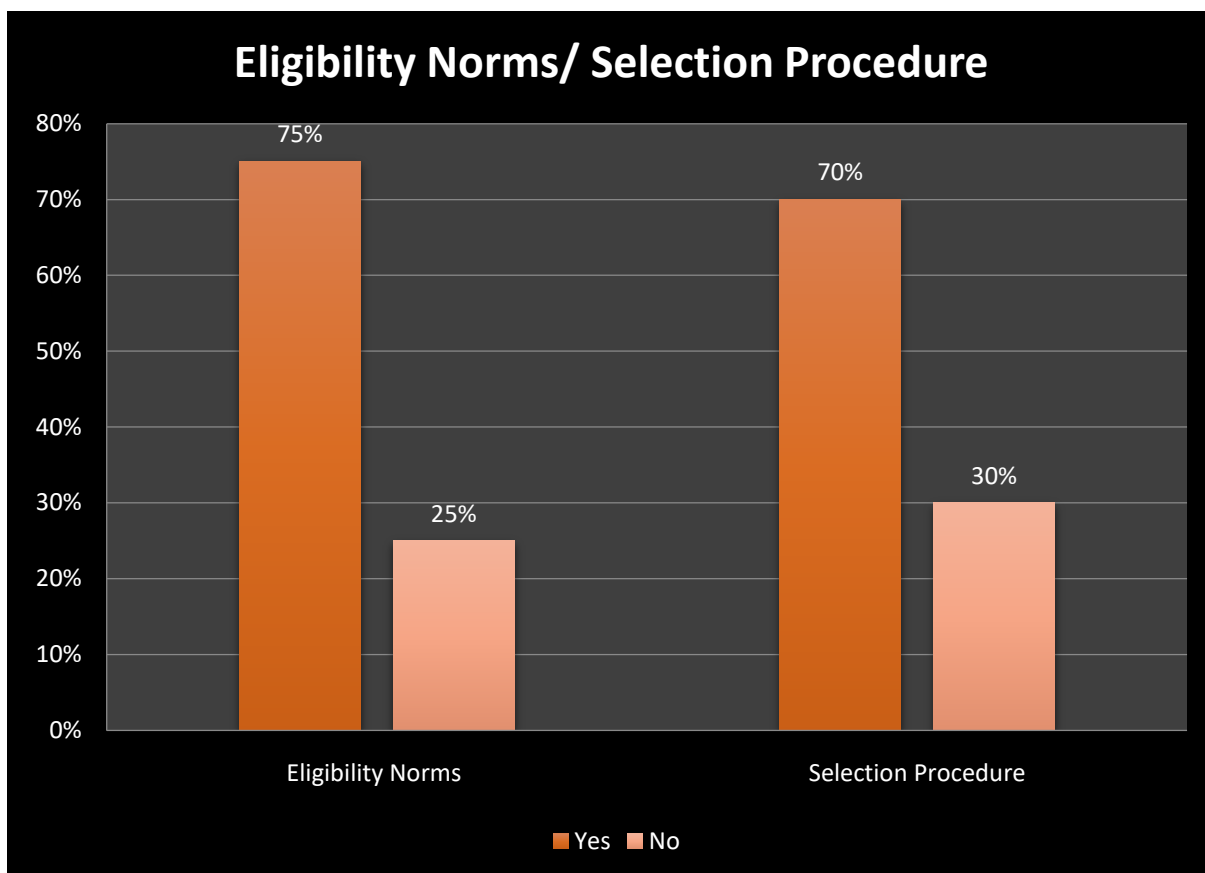


*Figure 3.7 NRP responses on Visibility Status of the Scheme*

The above chart is a representation of the responses of NRPs on the '*Visibility Status*' aspect of the scheme.

The above graph represents that all the NRPs (100%) have responded that the visibility of the scheme is not there. Most of the NRPs believe that the scheme or the honour is unknown to the general public and there is a need to bring reforms in its visibility. The main aim and purpose set by the founding members of the scheme was to expand and glorify the importance of those excellent scholars who have outshone in their domain and have received multiple international and national honours, so to set inspiration for the young generation. But since there is no visibility of the scheme it is not being able to fulfil its purpose.

## 6. ELIGIBILITY NORMS / SELECTION PROCEDURE

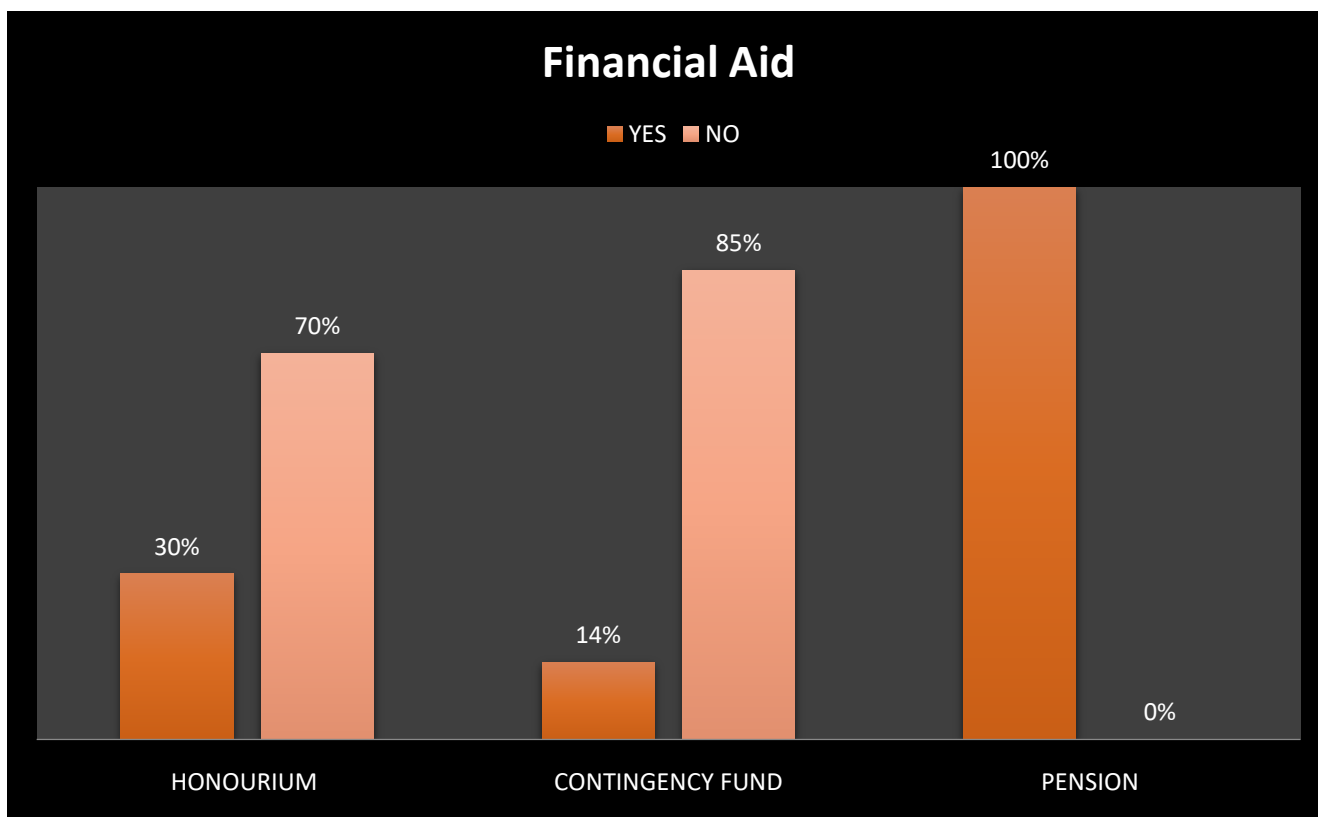


**Figure 3.8 NRP Responses on Eligibility Norms/Selection Procedure Revision**

The above data reflects responses of NRPs on selection procedure and eligibility norms for selections. The above responses suggest that 75% of the NRPs were in favour of revised eligibility criteria under the scheme while 25% NRPs suggested that as this is an honour therefore there should no eligibility criteria apart from the existing one.

The above data also reflects that 70% of the NRPs were in the favour of inclusion of a revised selection procedure under the scheme.

## 7. FINANCIAL AID (HONORARIUM, PENSION AND CONTINGENCY FUNDS)



*Figure 3.9 NRP Responses on the Financial Assistance*

The above bar diagram gives an indication that there is need for revision of financial assistance provided to NRPs. The statistics shows that the satisfaction levels of NRP's under the three subheadings as the following:

### **HONOURIUM**

The above graphs points that the 70% NRPs responded the current honorarium of Rs. 75,000 is not enough while 30% of them have viewed it to be significant enough with regards to the expenses of research and publication.

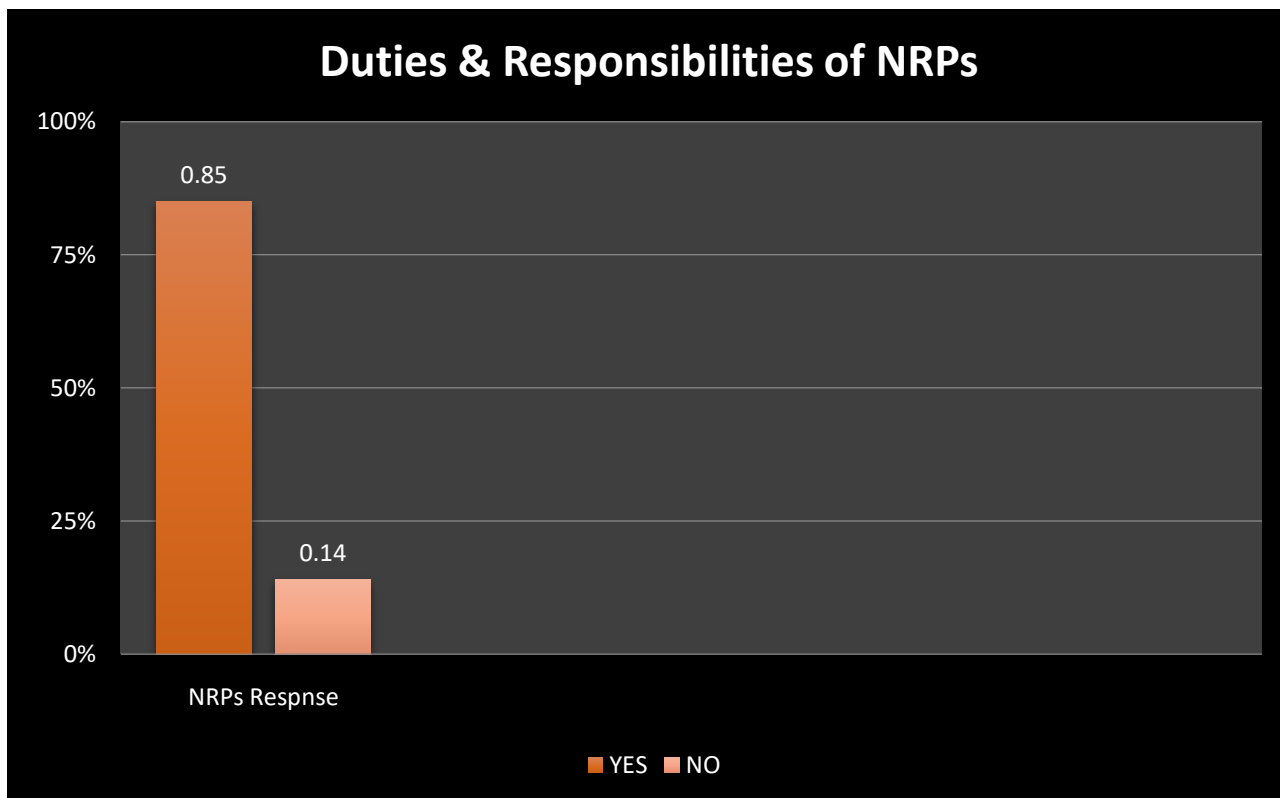
### **CONTINGENCY FUNDS**

The graph highlights that 85 % of the NRPs suggested that the contingency funds provided by the MHRD was not enough for their expenditures while 14% were satisfied with the same.

### **PENSION**

The above graph depicts that 100% of the NRPs were satisfied with the current pension fund.

## 8. DUTIES AND RESPONSIBILITIES



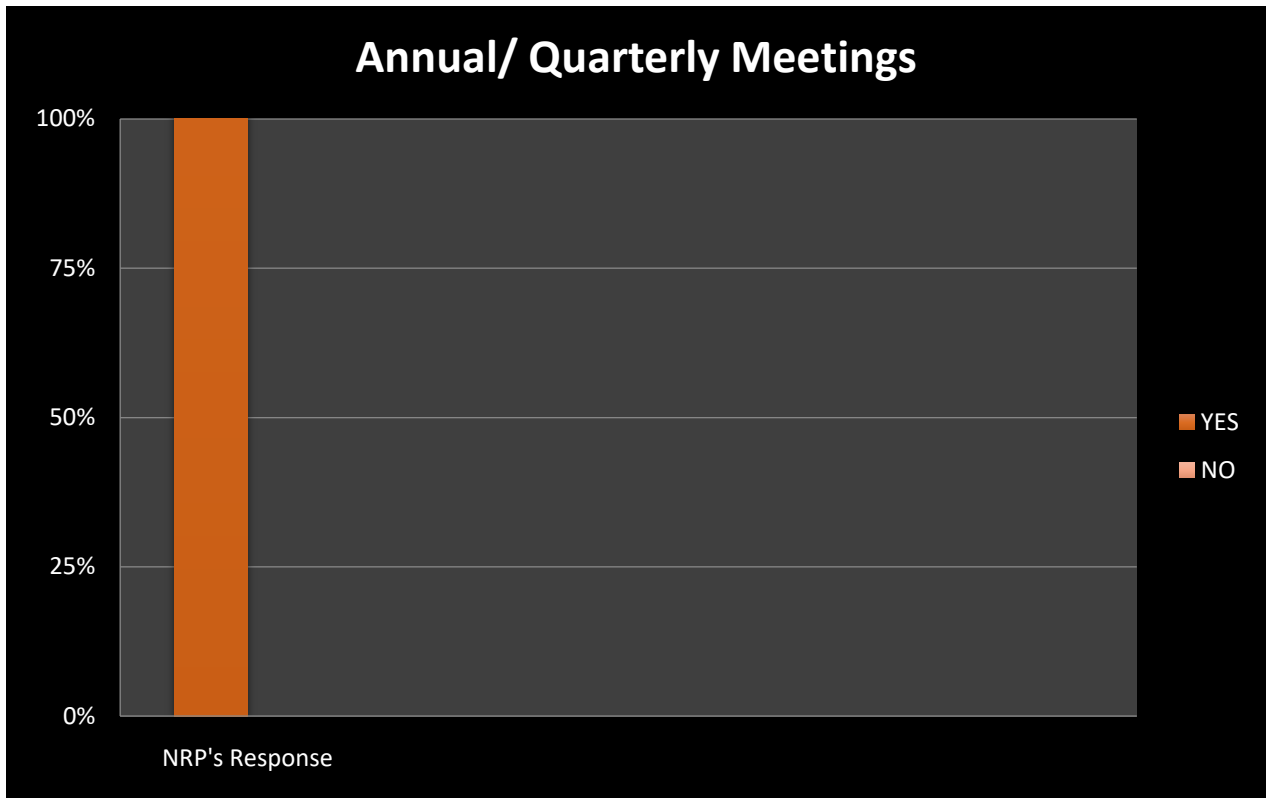
*Figure 3.10 NRP Responses on Duties and Responsibilities of NRP*

Six out of Seven NRPs believed that there should be certain roles and responsibilities may be attached to the NRPs. The major consensus was that the purpose of the scheme is to support and enhance the research and academics in all the domains of education. The honor is provided to a few of the excellent academicians who have excelled in their field of research. The experience and stories of these legends needs to reach out to the future generation. These pioneers should be given platforms for sharing their knowledge in form of seminars, conferences, keynote presentation, special guest lectures and Mentorship Programmes. Such events should be organized and sponsored by the Ministry of Human Resource Development.

The graphs show a clear picture that 85% of the NRPs believe that there should be certain roles and responsibilities that should be assigned to the NRPs while the 14% of them disagree and points out that there shouldn't be any roles and responsibilities.

In addition to this all the NRPs agreed that the NRPs should be recommended to write an annual report describing the work they did as the National Professors in the year.

9. ANNUAL/ QUARTERLY MEETINGS



*Figure 3.11 NRP Responses on Annual/Quarterly Meetings of NRP*

The above graph is representational of the NRPs responses on the question whether there is a requirement for annual or quarterly meetings of NRPs and Ministry Officials. The data suggests that 100% of the NRPs suggested and agreed that an annual or quarterly meeting could be organized by the MHRD with the present NRPs for collaboration and contributions with the Government.

### 3.4. FINDINGS

In the study conducted by IIPA the data was analyzed under different aspects of the NRP scheme. The various findings that were made by the IIPA team are as following:

The study team observed and derived the following findings while analysing the data pertaining to the scheme:

#### 1. **Visibility Status:**

The data provided by the seven NRPs of the scheme constructively highlights the point that the visibility of the National Research Professorship Scheme needs to be considered seriously. Most of the NRPs believe that the scheme or the 'Honour' is unknown to the general public and there is a need to bring reforms to its visibility.

#### 2. **Eligibility Norms:**

The data provided by the seven NRPs suggests that the existing eligibility norms may be revised to include new provisions under the age criteria and the level of contributions of the nominees. Age criteria under the eligibility norms was found to be unsuitable as many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to age limitation. Further NRPs suggested that an NRP's pan India as well as a global presence in the field of academia may be considered before the appointment.

#### 3. **Selection Procedure:**

The selection procedure lacks a set framework and guidelines regarding the application procedure as well as selection criteria. The process of nomination and final selection announcement is also not specified currently. There is no specified application form or deadlines regarding the same.

#### 4. **Financial Support (Honorarium, Pension and Contingency Funds):**

The research study gives an indication that there is a requirement of clearly defining the utilization guidelines for the financial assistance provided to the NRPs. The data also suggested that financial assistance also needs to be revised. Detailed statistics under the three subheadings namely: Honorarium, Pension, and Contingency Funds have been described below:

## **A. Honorarium**

The honorarium statistics shows that around 70% of the NRP's are not satisfied with the current honorarium and they have suggested a revision for the same, since these funds are not enough to support the current expenditure in the field of research.

The study shows an uneven revision of the honorarium. The honorarium in the initial 35 years was Rs. 2500 which later got revised to Rs. 3000 in 1982. It was further revised to Rs. 5000 to Rs. 8000 after 11 years and gained revised to Rs. 25000 in 7 years. The most recent revision was done in 2009 to Rs.75,000. The trend of revision needs to follow a statutory procedure and timeline.

## **B. Pension**

The pension funds as per all the honourees were enough to run their post retirement errands. The data analysis graph depicts a noticeably clear picture of all the NRPs been satisfied with the current pension trend.

The graphs depict that the pension was started 20 years after the commencement of the scheme. The first pension was started in 1969 at Rs.1000 till 1991 and after 22 years it was revised to Rs 3000. The third revision took place in 1999 the amount was revised to Rs. 9000. The most recent revision was done in the year 2009 revised to Rs. 25,000.

## **C. Contingency Fund**

The contingency funds required more clarity in term of utilization. The contingency fund was started in 1987 with Rs. 20,000, which was revised after 12 years in 1999 to Rs. 50,000. The most recent revision took place in 2009 to Rs. 1,00,000. The revision of financial funds follows an uneven trend both monetarily and time wise. A standard procedure needs to be adopted. It needs to be upraised in accordance to present expenditures and trends followed by other research professorship schemes and honours.

## **5. Duties and Responsibilities:**

As per the data analysis it signifies that 85% of the NRPs agreed that there need to be certain duties and responsibilities assigned to the NRPs while the 14% of them disagreed and pointed out that there is no such requirement as many NRPs already stay engaged

with their own priorities. In addition to this all the NRPs agreed that the NRPs may be recommended to write an annual report describing the work they did as the National Research Professors in the year.

## **6. Major Achievements of the Scheme**

As per the data collected under the study and responses of NRPs interviewed by the study team, the scheme was found to be successful in enabling the NRPs in executing many accomplishments and plans. The main objective of the scheme i.e. recognizing the best of intellectuals in their respective fields was also nearly achieved.

## **7. Additional Findings**

### **A. NRP Appointments (Year-wise / Discipline-wise / Gender wise)**

- An irregular pattern of appointments through the years since 1949 was observed throughout the data.
- Further, the number of appointments made in different fields of specialization under the scheme since 1949 is also not reform and some areas of specializations have been considered more often than the other areas while certain areas of specializations that emerged in the later decades since the scheme's inception have been entirely missing.
- The data also reflected a skewed gender ratio among the appointments made under the scheme.

### **B. Scheme Timeline**

Another important finding that was made by the study team was that there is an irregular pattern of appointments as the number of appointments made per year does not follow any guideline. Moreover, a lack of timeline under the scheme was observed. The dates and deadlines for application submissions and nominations have not been defined under the scheme. Further, no timeline has been included for public announcements and appointments made under the scheme.

### **C. Centralized Data System**

From the study it was observed that a centralized system of data and updates regarding the scheme is required for all the NRPs as well as general public for information sharing and staying updated.

**CHAPTER 4**

**SUGGESTIONS AND  
RECOMMENDATIONS**

## 4. SUGGESTIONS AND RECOMMENDATIONS



*Figure 3.12 Important Suggestions and Recommendation*

### 4.1. SUGGESTIONS AND RECOMMENDATIONS BY NRPS

Based on the evaluation conducted by IIPA, many significant observations were made. The evaluation process brought out important conjectures for serious consideration in the reformulation of the National Research Professorship Scheme. The various observations noted by the study team of IIPA have been detailed below along with suitable suggestions conjured up after elaborating rounds of discussions with the NRP Honourees.

The observations and the suggestions shared by NRP Honourees with the study team are summarised below:

## **1. Scheme Framework**

Aims and Objectives of the Scheme should be well defined in order to effectively execute the scheme. There needs to be an institutionalization of procedures and fund utilization guidelines under the scheme.

## **2. Visibility Status of the Scheme**

The scheme and appointments made under it lack a publicity aspect which hinders the main of 'encouragement' of the honourees. The NRP appointments may be made public through press releases, media coverage and associating them with an institute or university to further their contribution in the domain of their expertise.

## **3. Eligibility Norms**

The NRPs suggests that the existing eligibility norms may be revised to include new provisions under the age criteria and the level of contributions of the nominees. Age criteria under the eligibility norms was found to be unsuitable as many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to age limitation. Further NRPs suggested that an NRP's pan India as well as a global presence in the field of academia may be considered before the appointment

## **4. Selection Procedure**

The NRPs suggested there may be a selection committee consisting of experts from different areas of specializations as well as retired NRPs under the scheme. This selection committee could play as a guiding figure for the Ministry officials and Ministers during finalization of appointments.

NRPs also suggested that there should be zero political interference and zero ideological interference in the selection process. Further, NRPs have an opinion that selection process could be made transparent and more structured.

## **5. Financial Support**

The financial allocations under the scheme may be revised. NRPs have an opinion the current honorarium, pension and contingency funds have remained static for many years while cost of travel, of living, of books, of attending conferences etc., have gone up considerably hence, there is a strong case for considering upward revision under all three categories.

NRPs also believe that honour should not quantify in terms of monetary benefit. But certain clarity is required from Ministry regarding utilisation of contingency fund. Also, that contingency fund should be as per requirement of the NRP, and it should be well defined how to use it.

## **6. Duties and Responsibilities**

The scheme lacks well-defined rules regarding the roles and responsibilities of the NRPs which is crucial as the NRP is not only an honor but also a Professorship which demands that the NRP may be required to fulfill few responsibilities in national service.

NRP's also be given roles to provide mentorship to the young generation and young scholars. Their wisdom, experience and excellence should be utilized to boost the work of young generation by putting forth their own experience and suggestions.

## **7. Annual Report Submission**

NRPs strongly believes that it should be mandatory to submit annual reports of work done including achievements and difficulties encountered as NRPs are supported by Government grants from taxpayer's money.

## **8. Facilitation of Annual or Quarterly Meetings**

Facilitation of annual or quarterly meetings of the serving NRPs with the MHRD could be organized in order to maintain productive ties and further encouragement of the honorees.

## **9. Post-Tenure Guidelines**

At the end of their tenure, NRP may be asked to produce a publishable report of the various research works and accomplishment undertaken and achieved by them. They may also be invited or public lectures in Public Universities and other Institutions of Eminence.

## **10. Benchmark of Excellency**

In terms of excellence, the benchmark set by the very first appointment was Nobel Laureate Dr. C. V. Raman. The scheme holds a prestige of its own, the title of NRP is a badge of honour for the NRPs, and therefore the selection committee may evaluate the international and national presence of the nominee as well as their incredible contributions to the domain of knowledge before their final selection.

## **4.2. SUGGESTIONS AND RECOMMENDATIONS BY IIPA**

IIPA recommends continuation of the scheme as the scheme is an expression of the country's gratitude towards the academic legends and their contribution that has put forth India on world map. These contributions need to be honoured, highlighted, and celebrated by the nation. This also allows the government to set a precedent for the younger generation and help them in drawing inspiration from NRPs' dedication, handwork, discipline, and quest for knowledge.

The National Research Professorship (NRP) India's premier and highest honour, celebrates the greatness of the spirit and transformative leadership of academicians and researchers in India. In the past seven decades, the honour has been bestowed on over 46 outstanding academicians in the field of research, whose selfless services has benefited our society.

However, in order to make the scheme more effective, the study team of IIPA has the following summary suggestion and recommendations for consideration of the competent authorities.

### **1. Visibility Status may be enhanced**

Announcement of the NRP appointments may be made public via media platforms and press releases. Some constant and constructive efforts might be taken to enhance the visibility of the scheme by organizing events and lectures of selected NRPs for general public specifically the young students in colleges and universities in the country.

### **2. Eligibility Norms may be revised**

There may be some amends in the eligibility norms. Relaxation in the age criteria of one to two years may be given to the deserving and outstanding intellectual professors as age criteria under the eligibility norms was found to be unsuitable and many NRPs suggested that certain well-deserving candidates missed out on this prestigious opportunity due to this.

IIPA also suggests the nominee may have received recognition for his/her work from national / international scientific bodies such as fellowship in prestigious academies and S&T awards.

### 3. Selection Procedure may be revised

For further amplification of the scheme IIPA suggests the following selection procedure for appointment of the NRPs:

#### A. Applications/Nominations:

- a) The call for applications or nominations may be kept open throughout the year.
- b) The details of the same may be notified through a dedicated Web Portal on the MHRD website.
- c) An Application/ Nomination form may be set up for acquiring of all the essential details of the candidates. The same form may aid the selection committee during their final selection.
- d) The nominations may also be received from previously serving NRPs as well as literary experts, academicians, national level institute, universities, and numerous other recognized associations.

#### B. Selection Committee:

- a) **Sub-Selection Committees (SSC)** may be established to aid the already existing committee consisting of the Hon'ble Prime Minister, Hon'ble Home Minister, Hon'ble Finance Minister and Hon'ble HRD Minister.
- b) These SSCs may include the experts and recognized persons of eminence from different areas of specialization as well as retired NRPs of that specific field.

**The SSC members could be some prominent professors or professional from that specific field for which a nomination has been considered. Any previously served NRP could also be considered for empanelment in the SSC.**

- c) The SSCs may screen the nominations and applications and forward a provisional list of selected candidates for approval and final selection from the committee of Hon'ble Ministers. For the same, the SSCs may meet once a year or whenever the need arises and recommend suitable candidates from that specific fields.

#### **D. Final Selection and Announcement:**

The final selection may be approved by all the four Hon'ble Ministers and the name of the newly appointed NRP, then, may be announced by the Ministry of Human Resource and Development through the various public mediums/platforms.

The honouree(s) may be formally recognised for the honour through following mechanism: -

1. The list of the recipient's name shall be placed on the NRP web portal and press release through newsletter by the MHRD.
2. The individual may be informed through formal letters and email indicating that the individual has received the honour.
3. The honouree shall be presented a framed certificate or engraved plaque as a recognition.

#### **4. Excellence factor needs to be maintained**

Aspired by C.V. Raman Sir, the same level should be maintained, and it may not be influenced, therefore the selection committee may consider the international and national presence of the nominee before the final selection.

#### **5. Financial Assistance may be revised**

The financial support and honorarium may be revised as per the seventh pay commission or in accordance with the different needs of different NRPs in their respective research work. The revision may enable NRPs to cover all the expenditure that may incur in the publication of their research work.

#### **6. Duties and Responsibilities may be notified**

Certain duties and responsibilities may be assigned to the NRPs. In addition, an Annual Report or a collection of their works and achievement may be made mandatory for submission. The NRPs may also be associated with different universities and research institutions

#### **7. Annual General Meetings may be organized**

Annual General Meetings may be organized for the NRPs with the ministry and committee members on a yearly basis for feedbacks and other assessments.

## **8. Empanelment of NRPs with the Universities/ National level Institution**

The ministry may use the knowledge and experience of the beneficiaries to bring reforms in the education system of our country. The NRPs may be associated with the national level institutes and universities where special guest lectures and mentorship programs may be organized.

## **9. Collaborations between NRPs and GOI**

MHRD may organize public lectures or events and invite the NRPs for encouragement and promotion of research work in the country. Their suggestions may be considered for enhancement of the education system and research institution in the country.

## **10. Mentorship Programme**

MHRD may institutionalise the NRP Scheme in a manner to facilitate a mentorship program under the newly appointed NRPs. This may facilitate an efficient coordination with the NRPs to enable a comprehensive system of using their intellectual repository.

## **11. Appointments may cover wide range of disciplinary fields**

The scheme may be able to cover multiple and diverse fields of academics and knowledge rather than concentrating on certain specific fields as this will increase and diversify the intellectual repository of the scheme which would enable the fulfilment of the purpose of the scheme in a more efficient way.

## **12. Gender Ratio**

Since the MHRD has been constantly putting efforts to encourage the women laurels of our knowledge repository, more female researchers and professors may be promoted under the Scheme as the data suggests that the scheme has benefited only 7% of women honourees in the past.

## **13. Publications and Technical Support**

The hon'ble ministry may facilitate the arrangement of a logistical and technical support for the NRPs in terms of to help them in research and publication of their books.

## **14. Dedicated MHRD NRP Portal**

There may be an online webpage available for NRP scheme at MHRD's website. The portal may specify the procedure of the NRP selection, mention the purpose of the scheme, endorse the achievements of scheme, and mention the beneficiaries and their achievements in the field of

research. Also, their annual reports may be published on this portal and put in public domain. The portal would also contribute in increasing the visibility of the scheme.

#### **15. Central Database of all NRPs**

A database may be maintained of all the past and present beneficiaries along with their contact details and corresponding addresses and other relevant details for future evaluations of the scheme.

#### **16. Online Publications and Media releases**

The achievements and honours of the NRPs may be published by NRP on their portal and may be publicised on media platforms by the MHRD. Furthermore, the annual reports and work of the NRPs may be made available through digital archives.

#### **17. Digital Intellectual Repository**

A dedicated digital library portal of the NRPs research articles, books and projects may be maintained. And NRPs' research papers, books and projects may be put in public domain through the digital library, a special section dedicated in their name under the title of National Research Professors.

#### **18. Post-Tenure Guidelines**

At the end of their tenure, NRP may be asked to produce a publishable report of the various research works and accomplishment undertaken and achieved by them. They may also be invited or public lectures in Public Universities and other Institutions of Eminence.

#### **19. Scheme Timeline**

Another important finding that was made by the study team was that there is an irregular pattern of appointments as the number of appointments made per year does not follow any guideline. Moreover, a lack of timeline under the scheme was observed. The dates and deadlines for application submissions and nominations have not been defined under the scheme. Further, no timeline has been included for public announcements and appointments made under the scheme.

#### **20. Strengthen International Research Collaboration**

Through the Scheme NRP's may strengthen international collaboration in their respective areas with the national level universities and young scholars of the country. Such International ties could boost India's R&D and strengthen the knowledge economy.

## **21. Best Practices**

A thorough study was conducted of other similar schemes currently being in function in the country. Of those, some schemes were finalized by the IIPA team to be incorporated in the study for reference of the competent authorities. IIPA team recommends some of the best practices of such schemes for consideration while revising the NRP scheme. For detailed reference please refer to Chapter 5 on 'Best Practices'.

The list of best practices recommended by IIPA are as follows:

### **1. Distinguished Biotechnology Research Professorship Scheme**

Selection procedure of the scheme may be considered.

### **2. INSA Distinguished Professors Scheme**

Financial Emoluments, and Duties and Responsibilities may be considered.

### **3. SERB Research Scientists Scheme**

Financial Emoluments may be considered.

### **4. National Science Chair**

Selection Procedure, Financial Emoluments, and Duties and Responsibilities may be considered.

### **5. ICAR National Professorial Chairs**

Selection Procedure may be considered.

### **6. Sahitya Akademi Award**

Selection Procedure may be considered.

### **7. Jnanpith Award**

Selection procedure may be considered.

### **8. Sangeet Natak Akademi Ratna Award**

Selection Procedure may be considered.

## **22. New Thematic Pattern**

The new thematic pattern evolved by IIPA study team is described in detail from the next page.

### 4.3. NEW THEMATIC PATTERN FOR NRP SCHEME

In reference to suggestion and recommendation regarding a new thematic pattern, IIPA has formulated a thematic pattern for the National Research Professorship Scheme to be considered by the competent authorities while revisioning of the scheme. IIPA recommends the following guidelines for consideration by the competent Authorities of the Ministry.

<b>The Honour</b>	<p>The scheme aims to recognize and honour the exemplary contributions of prominent personalities and academicians in their respective fields. The honour is a facilitation of the honourees' work specifically their contribution in the field of research and knowledge creation in their area of specialization. The honour also aims to encourage and support the honourees' in their future works and projects.</p> <p>The scheme of National Research Professorship was established in by the Government of India with this purpose of honouring distinguished academics and scholars in recognition of their contribution to the field of knowledge in 1949.</p>
<b>Objectives</b>	<p>The Professorship is awarded in recognition of outstanding contributions made by the personalities into the advancements of knowledge in their respective branch of academic field and profession. The Professorship also aims to enable the honouree to continue to contribute to the subject of his/her choice by providing financial support.</p>
<b>Eligibility</b>	<ul style="list-style-type: none"><li>• For appointment as National Research Professor, any Indian National who have attained the age of 65 years and who have made outstanding contribution in their respective disciplinary fields is eligible to be considered.</li></ul>

	<ul style="list-style-type: none"> <li>• Another important criterion is that the person in consideration shall also still be capable of productive research.</li> <li>• Nomination from any one of the following fields is eligible to be considered: Innovation, Science and Technology, Medical sciences, Life sciences, Social Sciences, Journalism, Social Work, Arts and Literature.</li> <li>• The nominee may also have received recognition or awards for his/her work from national / international organization. These achievements and awards of a scholar in different scale of recognition (national and international) shall be given weightage while consideration by the SSCs.</li> </ul> <p><b>Exemption:</b> An exemption or relaxation could be given in the Age criteria provided the nominee has reached at least the age of 62 years and working on independent basis i.e. without any financial support from outside sources.</p>
<b>No. of Positions and Frequency of Appointment</b>	<ul style="list-style-type: none"> <li>• The maximum number of existing National Research Professors at any given time, excluding those who have retired on life pension, is not to exceed 10. The general convention is to keep at least 2 positions vacant to deal with any immediate requirements.</li> <li>• The Appointment cycle may be carried out in intervals of every two to three years.</li> </ul>
<b>Duration</b>	<p>The appointment is made initially for a period of 5 years which is extendable by another term of 5 years. After which the National Research Professor is entitled to life pension.</p>
<b>Selection Procedure:</b>	<p><b>A. Applications/Nominations:</b></p> <ul style="list-style-type: none"> <li>a) The call for applications or nominations may be kept open throughout the year.</li> <li>b) The details of the same may be notified through a dedicated Web Portal of the MHRD website.</li> <li>c) An Application/ Nomination form may be set up for acquiring</li> </ul>

of all the essential details of the candidates. The same form may aid the selection committee during their final selection.

d) The nominations may also be received from previously serving NRPs as well as literary experts, academicians, universities, and numerous other recognized associations.

**B. Selection Committee:**

a) **Sub-Selection Committees (SSC)** may be established to aid the already existing committee consisting of the Hon'ble Prime Minister, Minister of Home Affairs, Finance Minister and Minister of HRD.

b) These SSCs may include experts and recognized persons of eminence from different areas of specialization as well as retired NRPs of that specific field.

**The SSC members could be some prominent professors or professional from specific field for which a nomination has been considered. Any previously served NRP could also be considered for empanelment in the SSC.**

c) The formation of SSCs may be defined based on different disciplinary fields. For instance, for the field of Medical Sciences there could be one SSC consisting of previously serving Medical NRP(s) and/or another important medical figures. Similarly, for the field of Literature, there could be a separate SSC which can include previous Literary NRP(s) and/or other prominent personality(s) of international acclaim.

**The number of members in an SSC may not exceed 5 at any point in time.**

d) These SSCs may screen the nominations and applications and forward a provisional list of selected candidates for approval and final selection to the committee of Hon'ble Ministers.

For the same, the SSCs may meet once a year or whenever the need arises and recommend suitable candidates from that specific fields.

	<p><b>e) Gender Ratio</b></p> <p>A balanced approach may be followed while appointing the NRPs and a special preference may be given to deserving female nominees under the Scheme as the data suggests that the scheme has benefited only 7% of women honourees in the past. This will allow the Ministry to maintain a healthy Gender ratio in the appointments and fulfil the Government’s aim of women empowerment.</p> <p><b>C. Final Selection and Announcement:</b></p> <p>The final selection may be approved by all the four Hon’ble Ministers and the name of the newly appointed NRP, then, may be announced by the Ministry of Human Resource and Development through the various public mediums.</p> <p>The honouree(s) may be formally recognised for the honour through following mechanism: -</p> <ol style="list-style-type: none"> <li>1. The list of the recipient’s name shall be placed on the NRP web portal and press release through newsletter by the MHRD.</li> <li>2. The individual may be informed through a formal letter and email indicating that the individual has received the honour.</li> <li>3. The honouree shall be presented a framed certificate or engraved plaque as a recognition.</li> </ol>
<p><b>Emoluments and Benefits</b></p>	<ul style="list-style-type: none"> <li>• The post of National Research Professor shall continue to carry an honorarium amount every month for the whole duration of tenure of the NRP.</li> <li>• After completion of first term or the extended second term, a National Research Professor may then be entitled to a life pension every month. The honorarium and pension paid to National Research Professor are exempted from Income Tax.</li> <li>• In addition to honorarium, a lumpsum payment for meeting expenditure on contingencies like office expenses, salary of supporting</li> </ul>

	<p>staff, purchase of equipment. etc. may also be admissible to the National Research Professor.</p> <ul style="list-style-type: none"> <li>• The rules should be clearly stated regarding the fund utilizations by the NRPs at the time of Appointment.</li> <li>• The current amount of Rs. 75000/- (honorarium), Rs. 25,000/- (pension) and Rs. 1,00,000/-(contingency) may be revised and increased in accordance with the Pay Commissions guidelines and a standard increment procedure may be followed.</li> </ul>
<p><b>Duties and Responsibilities</b></p>	<ol style="list-style-type: none"> <li><b>1. Empanelment with Public Institutions:</b> During tenure, the NRP may operate in affiliation to any recognized research institute / university located in India. The empanelment may be considered as an emeritus position in the same institution and only be applicable if the NRP is willing to accept the same.</li> <li><b>2. Public Lectures:</b> He/she may also be invited to deliver talks/lectures during the tenure as NRP at the behest of the MHRD</li> <li><b>3. Mentorship:</b> In order to establish and nurture a novel school of thought around the NRP, he/she should leverage the work in the thematic areas related to his/her specialization by encouraging the younger academicians to work and further contribute in knowledge creation and nation-building.</li> <li><b>4. Annual Report:</b> The NRPs may submit a yearly detailed report of the work done at the end of the year along with statement of expenditure for release of grant for next year.</li> <li><b>5. Comprehensive Report:</b> The NRP may, after the expiry of the Professorship, also present a comprehensive report in the form of a review article of all the works and accomplishments acquired during the tenure as NRP. The same may be valuable to enhance the effectivity of NRP Scheme.</li> </ol>

**CHAPTER 5**  
**BEST PRACTICES**

## 5. BEST PRACTICES

The IIPA study team conducted a cross sectional study of the NRP scheme with other similar schemes that are currently being executed in the country by various organizations. The cross-sectional study was done under the various aspects of a scheme, namely, Objective, Eligibility, Selection Procedure, No. of Positions offered, Duration, Financial Assistance and Duties and Responsibilities of the Beneficiaries.

A thorough study was conducted for the schemes offered by various Government institutions and organizations in the Academic as well as Creative Fields.

A list of Schemes and Awards were selected for this cross-sectional study based on the objective stated under the NRP scheme. Each of these schemes and Awards similarly aim to honor and encourage Academicians and Artists in different fields and support them in furthering their careers and contributions.

IIPA suggests that best of the practices may be selected from each of the them and incorporated in the National Research Professorship Scheme. The NRP scheme shall be enabled to effectively achieve its goals that were set by its founding figures in the Government.

The best of the practices from the following schemes and awards may be considered by the Ministry for further improvements in the NRP Scheme.

The list of selected schemes and awards is as the following:

- 1. Distinguished Biotechnology Research Professorship Scheme**
- 2. INSA Distinguished Professors Scheme**
- 3. SERB Research Scientists Scheme**
- 4. National Science Chair**
- 5. ICAR National Professorial Chairs**
- 6. Sahitya Akademi Award**
- 7. Jnanpith Award**
- 8. Sangeet Natak Akademi Ratna Award**

The details of all the schemes and awards considered under this study has been provided here in a tabular form for an easy reference for the Ministry.

## 5.1. DISTINGUISHED BIOTECHNOLOGY RESEARCH PROFESSORSHIP SCHEME

*Table 5.1 Details of DBT Scheme*

<b>Scheme</b>	<b>DISTINGUISHED BIOTECHNOLOGY RESEARCH PROFESSORSHIP AWARD SCHEME</b>
<b>Organization</b>	<b>Department of Biotechnology (DBT), Ministry of Science and Technology</b>
<b>Objective</b>	<ul style="list-style-type: none"> <li>• The main aim of the scheme is to utilize the expertise of superannuated scientists, who are scientifically active and capable of making significant research contributions in biological sciences, biotechnology and related fields promoted by DBT.</li> <li>• The Professorship will provide recognition to a person who has made outstanding scientific research contributions and is still able to extend his expertise and services for advancement in the Biotechnology related fields.</li> </ul>
<b>Eligibility</b>	<p>The awardee should be a distinguished Indian scientist in Biotechnology or related fields. He/she should be truly outstanding and continue to publish research work of extremely high standard. He/she should be a fellow of at least one of the following National Academies:</p> <ol style="list-style-type: none"> <li>a) Indian Academy of Sciences, Bangalore</li> <li>b) National Academy of Sciences, Allahabad</li> <li>c) Indian National Science Academy, New Delhi</li> <li>d) National Academy of Agricultural Sciences</li> </ol>
<b>No. of Positions</b>	Total number of awards shall not exceed five at any given time. Fresh selection will be made only against vacancies.

<p><b>Duration</b></p>	<p>The tenure of the Distinguished Biotechnologist Award would be for a period of three years extendable for further two years based on the review of work undertaken by the scientist in the first three years.</p>
<p><b>Selection Procedure</b></p>	<p>A Standing Committee comprising Experts in the field of Life Sciences and Biotechnology is constituted by DBT for the evaluation of the nominations/application received.</p> <p>This Expert Committee will meet and recommend suitable scientists for the Distinguished Biotechnologist Awards.</p> <p>The Committee would normally meet once a year or whenever the need arises.</p>
<p><b>Financial Emoluments</b></p>	<ul style="list-style-type: none"> <li>• Each Distinguished Biotechnologist will receive award money @Rs. 60,000/- per month.</li> <li>• In addition, a contingency grant of Rs. 50,000 per annum would be provided for meeting expenditure of the awardee on secretarial assistance, telephone, domestic travel, stationery etc.</li> <li>• The scientist would also be given a grant (not exceeding Rs. 20 lakhs) for implementing a research project proposed by him/</li> </ul>
<p><b>Duties and Responsibilities</b></p>	<ul style="list-style-type: none"> <li>• Progress report on the project work done shall be submitted to DBT at the end of each financial year along with the statement of Expenditure and Utilization Certificate for release of grant for the next year.</li> <li>• The DBT distinguished Professor will devote his whole time to the project for which financial assistance is provided and he will not accept any other regular or part time remunerative job during his tenure as such Professorship.</li> <li>• He/she will also be invited to deliver a talk during one of the DBT meetings after completion of his/her tenure as DBT Distinguished Research Professor. At the completion of the term of the Award, a comprehensive work report should be submitted.</li> </ul>

## 5.2. INSA DISTINGUISHED PROFESSORS SCHEME

*Table 5.2 Details of INSA Scheme*

<b>Scheme</b>	<b>INSA DISTINGUISHED PROFESSORS</b>
<b>Organization</b>	<b>INDIAN NATIONAL SCIENCE ACADEMY (INSA)</b>
<b>Objective</b>	The main aim of the Professorship is to provide recognition to a person who has made outstanding scientific research contributions and to enable him/ her to continue to contribute to the subject of his/her choice.
<b>Eligibility</b>	<ul style="list-style-type: none"> <li>• Only superannuated Indian Fellows of INSA with no other source of support (except pension) will be eligible.</li> <li>• The upper age limit to apply for INSA Distinguished Professors is 75 years.</li> <li>• Fellows having any position with Honorarium/Fellowship/ Salary will not be eligible.</li> </ul>
<b>No. of Positions</b>	There will be a total of 10 Professorial Chairs.
<b>Duration</b>	The Professorship chairs are tenable for three years only
<b>Selection Procedure</b>	The President will present the name/s of the scientist/s, selected with the help of a Committee constituted for the purpose, for approval of the Council. The name/s of the awardee/s will be announced in the subsequent General Body Meeting.
<b>Financial Emoluments</b>	<ul style="list-style-type: none"> <li>• Honorarium: Rs.1.00 lakh per month</li> <li>• Contingency Fund: Rs.2.00 lakhs per annum</li> <li>• Pension: Not Available</li> </ul>

<b>Duties and Responsibilities</b>	<ul style="list-style-type: none"> <li>• The INSA Distinguished Professors shall present to the Academy a yearly detailed report of the work done at the end of the year along with statement of expenditure for release of grant for next year.</li> <li>• He/she shall, after the expiry of the Professorship, also present a comprehensive report in the form of a review article for publication in Academy's Proceedings.</li> <li>• He/she may also be invited to deliver a talk during one of the INSA meetings after completion of his/her tenure as INSA Research Professor.</li> <li>• All the INSA Distinguished Professors are expected to participate in outreach programmes for school and college students as a part of the award.</li> </ul>
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### 5.3. SERB RESEARCH SCIENTISTS SCHEME

*Table 5.3 Details of SRS Scheme*

<b>Scheme</b>	<b>SERB RESEARCH SCIENTISTS SCHEME9</b>
<b>Organization</b>	<b>Science and Engineering Research Board (SERB)</b>
<b>Objective</b>	<ul style="list-style-type: none"> <li>• To Identify and provide a platform for sustainment of the research career of INSPIRE Faculty and Ramanujan Fellows for an additional period of two years after completion of the regular tenure of five years in the respective schemes.</li> <li>• The scheme provides an opportunity for them to continue their research activities and to explore for regular positions during the intervening period.</li> </ul>

<p><b>Eligibility</b></p>	<ul style="list-style-type: none"> <li>• The scheme is open only to INSPIRE Faculty and Ramanujan Fellows.</li> <li>• The applicant should have completed or nearing completion of the tenure of INSPIRE Faculty of DST or Ramanujan Fellowship of SERB. Application shall be submitted within six months before or after completion of regular tenure of the schemes. However, previous batches may be allowed to apply now at the opening of this new scheme.</li> <li>• The upper age limit for INSPIRE Faculty/Ramanujan Fellows is 40 years at the time of submission of application.</li> <li>• SRS can be availed only once by a candidate in his/her career.</li> </ul>
<p><b>No. of Positions</b></p>	<p>N/A</p>
<p><b>Duration</b></p>	<p>Fellows for an additional period of two years after completion of the regular tenure of five years in the respective schemes. • The SRS is purely a temporary and contractual assignment, and is tenable for a period of 2 years, extendable to one more year, subject to performance evaluation. Under any circumstances, the support is not extendable beyond three years</p>
<p><b>Selection Procedure</b></p>	<ul style="list-style-type: none"> <li>• The application for SRS will be opened throughout the year for INSPIRE Faculty/Ramanujan Fellows. The details of SRS will be notified through their website.</li> <li>• Once an application is considered and found unsuitable under SRS scheme, application for the second time will not be entertained.</li> <li>• The transition to SRS may be done based on performance evaluation during the tenure of INSPIRE Faculty/Ramanujan Fellowships.</li> <li>• The application is evaluated by a Selection Committee constituted for the purpose. The Committee may consider the</li> </ul>

	<p>performance evaluation by the relevant subject expert committee during the tenure of the INSPIRE Faculty/Ramanujan Fellowship Scheme. If required, the applicants may be called for personal interview.</p>
<p><b>Financial Emoluments</b></p>	<p>The SRSs will be entitled to receive the grants as given below:</p> <ul style="list-style-type: none"> <li>• Emolument * Consolidated amount of Rs. 1,20,000/- per month</li> <li>• Research Grant Rs. 7,00,000/- per annum</li> <li>• Overheads Rs. 1,00,000/- per annum</li> <li>• Research grant can be used for minor equipment, consumables, contingencies and travel (within India).</li> </ul>
<p><b>Duties and Responsibilities</b></p>	<ul style="list-style-type: none"> <li>• There is no provision for providing manpower support under this scheme. The Research Scientist is expected to undertake the research objectives by himself/herself during the entire duration of the SRS Scheme.</li> <li>• The SRSs are not eligible to receive any other research project / fellowship from any Government or Non-Governmental source during the tenure of the Scheme.</li> <li>• The SRSs must seek the consent of SERB if he/she intends to be away from the implementing institute (except for field work related to the project) continuously for a period more than eight weeks.</li> </ul>

#### 5.4. NATIONAL SCIENCE CHAIR

*Table 5.4 Details of National Science Chair Scheme*

<b>Scheme</b>	<b>NATIONAL SCIENCE CHAIR</b>
<b>Organization</b>	Science and Engineering Research Board (SERB)
<b>Objective</b>	The main aim of the scheme is to recognize active eminent senior resident Indian superannuated scientists for their outstanding contributions both nationally and internationally, in the area of Science, Technology, Engineering, Mathematics (STEM) and Medicine, to promote excellence and growth in R&D.
<b>Eligibility</b>	<ul style="list-style-type: none"> <li>• The nominee should be an active resident Indian scientist/academician, with outstanding research track record in any one or more areas of STEM and medicine, particularly during the last five years.</li> <li>• The nominee must have received recognition for his/her work from national / international scientific bodies such as fellowship in prestigious academies and S&amp;T awards</li> <li>• The nominee could be affiliated to an academic institutions / R&amp;D lab or should have consent on the subject from the future host institution.</li> <li>• The nominee should not currently hold any administrative roles and functions and is not in receipt of any other honorarium/fellowship/salary from any other institute.</li> </ul>
<b>No. of Positions</b>	The maximum number of Mode-1 positions is restricted to thirty (30), whereas in case of Mode-2, it would be restricted to a total of five (5).

<p><b>Duration</b></p>	<ul style="list-style-type: none"> <li>• The award will be given initially for a period of 3 years and is extendable for a maximum of another two years, subject to the recommendations of the NSCAC. Selected Chairs will have to join within a period of six months from the date of issue of the offer letter.</li> </ul>
<p><b>Selection Procedure</b></p>	<ul style="list-style-type: none"> <li>• The NSC implement the scheme in two modes.</li> <li>• In the first one, the support will be extended to those senior eminent scientists who after superannuation, continue to be active in research but do not possess a formal supporting arrangement. Thus, the need of a mechanism is required to utilize their expertise and let them sustain their efforts in research.</li> <li>• The second mode will recognize outstanding superannuated scientists to establish a benchmark for stature, value and eminence in national and international Science &amp; Technology (S&amp;T) communities.</li> <li>• The assessment criteria for selection of awardee will be decided by NSCAC and it will be generally based on the following considerations: <ul style="list-style-type: none"> <li>• Outstanding research track record of the nominee and international standing in the field.</li> <li>• Quality / originality of proposed research plan.</li> <li>• Ability to mentor young researchers and implement proactive approaches towards advancement of S&amp;T talent in the country.</li> </ul> </li> </ul>
<p><b>Financial Emoluments</b></p>	<ul style="list-style-type: none"> <li>• An amount of Rs 1.5 lakh per month will be given to both modes of awardees as fellowship.</li> <li>• The Research Grant in case of Mode-1 and Mode-2 will be</li> </ul>

	<p>Rs 25 lakhs per annum and Rs 5 Lakhs per annum, respectively.</p> <ul style="list-style-type: none"> <li>• For overhead expenses, Rs. 1.0 lakh per annum will be given to the host institution.</li> </ul>
<p><b>Duties and Responsibilities</b></p>	<ul style="list-style-type: none"> <li>• During tenure, the NSC will operate in affiliation to any recognised research institute / university located in India. All the grants pertaining to the NSC will be released through the Host Institute.</li> <li>• The Host Institute shall submit audited statement of accounts and utilization certificate to SERB. Release of subsequent grants will be subject to receipt of the necessary financial statements.</li> <li>• Support by SERB under the NSC Scheme should be acknowledged by the awardee in all publications, patents, etc.</li> <li>• The intellectual property rights arising out of the research work of the NSC will be governed by the norms of the Host institute.</li> <li>• The NSC shall furnish a detailed technical report on the work/activities carried out by him/her during the preceding year up to 31st March relevant to scientific direct contribution or promotion of scientific research. These rules and regulations of SERB may be revised or amended as and when found necessary.</li> </ul>

## 5.5. ICAR NATIONAL PROFESSORIAL CHAIRS

*Table 5.5 Details of ICAR Scheme*

<b>Scheme</b>	<b>ICAR NATIONAL PROFESSORIAL CHAIRS</b>
<b>Organization</b>	ICAR Indian Council of Agricultural Research
<b>Objective</b>	<ul style="list-style-type: none"> <li>• To promote excellence by recognizing outstanding scientist with proven output and outcome for creating a culture of basic research through their project work in the National Agricultural Research System (NARS).</li> <li>• Establishing and nurturing a novel school of thought around the recognized person.</li> </ul>
<b>Eligibility</b>	The nominee should have made significant contributions in the form of knowledge and technology generation as evidenced by published work in high impact journals, product/ process/ methodology generated, variety/ breed/ stocks released and notified, innovations as patents/protections etc.
<b>No. of Positions</b>	The total number of positions of ICAR National Professors would not exceed ten (10) at any given time.
<b>Duration</b>	The award of the National Professor will be tenurial in nature. He/she will be appointed for an initial tenure of five years, which can be extended for one or more tenures of five years subject to quality performance as assessed by the Selection Committee but not beyond 65 years of age.

<p style="text-align: center;"><b>Selection Procedure</b></p>	<ul style="list-style-type: none"> <li>• Indian nationals occupying positions of Professors/Principal Scientists or equivalent for at least 8 years and their age being not more than 60 years as on the specified date are eligible for nomination.</li> <li>• A Search-cum-Selection Committee (SSC) comprising of the following would be constituted with the approval of the President, ICAR Society: <ul style="list-style-type: none"> <li>• One Eminent Scientist: Chairman</li> <li>• Director General, ICAR: Member</li> <li>• Three reputed Scientists: Members (Nominated by D.G., ICAR)</li> <li>• DDG (Education): Member-Secretary</li> </ul> </li> <li>• The SSC would formulate criteria and other modalities for inviting nominations and recommend deserving nominees for selection. The process may involve formal applications, nominations by Eminent Scientists/ National Academies and Search Process by the SSC.</li> <li>• Nominations from the sponsoring institutions would be invited in the prescribed format that will include a detailed research project proposal. The nomination should be supported and recommended by the Agricultural University/ICAR Research Institute where he/she proposes to locate himself/herself.</li> </ul>
<p style="text-align: center;"><b>Financial Emoluments</b></p>	<p>The ICAR National Professor would be appointed in the monthly pay of Rs. 75,000/- (fixed) along with admissible allowances and as revised from time to time.</p>
<p style="text-align: center;"><b>Duties and Responsibilities</b></p>	<ul style="list-style-type: none"> <li>• ICAR National Professor will be involved in the selection of the project staff in his/her unit.</li> <li>• ICAR National Professor will be an invited member in all the scientific and research committees/bodies in the institution including being a member of the teaching faculty, wherever applicable. He/she would appropriately share the institutional</li> </ul>

	<p>facilities required for his/her work.</p> <ul style="list-style-type: none"><li>• In order to establish and nurture a novel school of thought around the ICAR National Professor, he/she should leverage the work in the thematic areas related to his/her project by encouraging the younger scientists to work in his/her collaboration/guidance for their adequate training/research career building.</li><li>• ICAR National Professor must deliver at least four lectures per year in ICAR-AU System/ Institutions under Ministry of S&amp;T or in courses being organized under Centre of Advanced Faculty Training/ Summer-Winter Schools by the Education Division of ICAR.</li></ul>
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## 5.6. SAHITYA AKADEMI AWARD

*Table 5.6 Details of Sahitya Akademi Award*

<b>Award</b>	<b>Sahitya Akademi Award</b>
<b>Organization</b>	Sahitya Akademi
<b>Significance</b>	The Sahitya Akademi Award is a literary honour in India, which the Sahitya Akademi, India's National Academy of Letters, annually confers on writers of the most outstanding books of literary merit published in any of the major Indian languages (24 languages like English, Rajasthani, and the 22 other listed languages in the Eighth Schedule of the Indian Constitution )
<b>Objective</b>	The award's purpose is to recognize and promote excellence in Indian writing and acknowledge new trends.
<b>Eligibility</b>	Outstanding contributions in the field of Literature in different languages across the country.
<b>No. of Positions</b>	3-4 persons every year in different languages
<b>Duration</b>	N/A
<b>Selection Procedure</b>	Based on recommendation of experts' committees constituted for the purpose.
<b>Financial Emoluments</b>	Award Money of Rs. 1,00,000/-
<b>Duties and Responsibilities</b>	N/A

## 5.7. JNANPITH AWARD

*Table 5.7 Details of Jnanpith Award*

<b>Award</b>	<b>Jnanpith Award</b>
<b>Organization</b>	Bharatiya Jnanpith
<b>Objective</b>	Jnanpith Award is an Indian literary award presented annually by the Bharatiya Jnanpith to an author for their "outstanding contribution towards literature".
<b>Significance</b>	Instituted in 1961, the award aimed at selecting the best book out of the publications in Indian languages commanding national prestige and of international standard.
<b>Eligibility</b>	The award is bestowed only on Indian writers writing in Indian languages included in the Eighth Schedule to the Constitution of India and English, with no posthumous conferral.
<b>No. of Positions</b>	1
<b>Duration</b>	N/A
<b>Selection Procedure</b>	<ul style="list-style-type: none"> <li>• The nominations for the award are received from various literary experts, teachers, critics, universities, and numerous literary and language associations. Every three years, an advisory committee is constituted for each of the languages.</li> <li>• There is an Advisory Committee for each language, consisting of three eminent literary critics and scholars. These committees are reconstituted every three years.</li> <li>• The proposals received are scrutinised by the concerned Language Advisory Committee. A Language Advisory Committee is not obliged to make its recommendations out of these proposals only. It is free to consider other writers before making its recommendation for the award.</li> </ul>

	<ul style="list-style-type: none"> <li>The recommendations of various Language Advisory Committees are placed before the Selection Board. The Board consists of not less than seven and not more than eleven members, who are all of high repute and integrity.</li> </ul>
<b>Financial Emoluments</b>	As of 2015, the cash prize has been revised to ₹11 lakh (equivalent to ₹13 lakh or US\$19,000 in 2019)
<b>Duties and Responsibilities</b>	N/A

## 5.8. SANGEET NATAK AKADEMI RATNA AWARD

*Table 5.8 Details of SN Akademi Ratna Award*

<b>Award</b>	<b>Akademi RATNA (Akademi FELLOWS)</b>
<b>Organization</b>	Sangeet Natak Akademi.
<b>Objective</b>	<ul style="list-style-type: none"> <li>To elect, by a majority of at least three – fourth of the members present and voting, artistes of outstanding merit in the field of Music, Dance and Drama or such persons as have rendered outstanding service to the cause of music, dance &amp; drama through their scholarship, research or original contributions as Fellows of the Akademi, provided they have been recommended for the election by the Executive Board and provided further the number of Fellows shall at no time exceed thirty.</li> <li>The President of India/Vice-President of India/Prime Minister of India or any eminent personality in the field will be invited to confer the honours.</li> </ul>

<b>Significance</b>	Sangeet Natak Akademi Puraskar (Akademi Award) (Saṅgīta Nāṭaka Akādamī Puraskāra) is an award given by the Sangeet Natak Akademi, India's National Academy of Music, Dance & Drama. It is the highest Indian recognition given to practicing artists
<b>Eligibility</b>	<ul style="list-style-type: none"> <li>• The Akademi Ratna is open to all regardless of nationality, race, caste, religion, creed, or sex.</li> <li>• No person below the age of 50 is ordinarily be considered for Akademi Ratna.</li> </ul>
<b>No. of Positions</b>	The Fellowship of the Akademi is the most prestigious and rare honour, which is restricted to 40 numbers at any given time. By the election of above four fellows there are presently forty Fellows of Sangeet Natak Akademi.
<b>Selection Procedure</b>	<p>Proposals for Akademi Ratna shall be initiated by:</p> <p>a) Ratna Sadasya (Akademi Fellows)</p> <p>b) Members of the General Council of the Akademi</p> <p>Chairman, SNA will have the powers to propose new names for consideration of the Executive Board / General Council even at the time of the meeting.</p>
<b>Financial Emoluments</b>	The purse money for Akademi Fellows is Rs 3.00 lakhs.
<b>Duties and Responsibilities</b>	N/A

# **ANNEXURES**

## ANNEXURES

### Annexure 1:

The Official List of National Research Professors since 1949 as provided by the Ministry.

Sl.No	Name of NRP	Year of Appointment	Area of Specialization
1.	Dr. C. V. Raman	1949	Physicist
2.	Dr. S.N. Bose	1958	Physicist
3.	Dr. R.B. Pal	1959	Science
4.	Dr. P.V.Kane	1959	Science
5.	Dr. S.K.Mitra	1962	Science
6.	Dr. D.N. Wadia	1962	Science
7.	Dr.V.R. Khanolkar	1963	Science
8.	Dr.S.K. Chaterjee	1965	Science
9.	Dr. S.R. Ranganathan	1965	Library science
10.	Dr. Salim Ali	1982	Ornithology
11.	Dr. TMP. Mahadevan	1982	Philosophy
12.	Dr. V.K.R.V.Rao	1984	Economics
13.	Dr. (Justice) D.D. Basu	1986	Jurist
14.	Dr. C.R.Rao	1987	Statistics
15.	Dr. A. Appadorai	1988	Arthropology
16.	Smt. Subhalakshmi	1989	Music
17.	Shri. Satyajit Ray	1992	Arts
18.	Dr. K. N. Raj	1992	Economics
19.	Dr. M.L. Dantwalia	1994	Economics
20.	Prof. Yashpal	1995	Author
21.	Prof. V. Ramalingaswamy	1995	Medical Science
22.	Prof. V. Ramaraju	1995	Arts
23.	Ustad Bismillah Khan	1995	Music
24.	Shri R.N.Dandekar	1996	Scholar
25.	Pt Ravi Shankar	1997	Music
26.	Dr. M.S.Valiathan	2006 (Re-appointed in 2011)	Medical Sciences
27.	Shrimati Mahasweta Devi	2006 (Re-appointed in 2011)	Literature
28.	Shri Habib Tanvir	2006	Arts
29.	Prof. C. N.R.Rao	2006 (Re-appointed in 2011)	Chemistry
30.	Prof. C.S. Sheshadri	2006 (Re-appointed in 2011)	Mathematics
31.	Prof. Obaid Siddiqi	2006 (Re-appointed in 2011)	Biology
32.	Prof. N.S. Ramaswami	2006	Journalism
33.	Dr. M.V. Pylee	2006	Political Jurisprudence
34.	Dr. Vina Mazumdar	2006	Sociology
35.	Prof. Bipan Chandra	2006 (Re-appointed in 2011)	History
36.	Prof. Andre Beteille	2006 (Re-appointed in 2011)	Sociaology
37.	Prof. Goverdhan Mehta	2009	
38.	Prof. Yashpal	2009	Science
39.	Dr. R.A. Mashelkar	2011	Chemistry
40.	Prof. Tapan Raychaudhuri	2011	History
41.	Prof. Jagdish Bhagwati	2011	Economics
42.	Dr. P. N Tandon	2014	Medical Science
43.	Dr. Ashok Gajanan Modak	2014	Economics
44.	Shri S.L Bhyrappa	2014	Literature
45.	Shri Suryakant Bali	2014	Literature
46.	Shri Jayanta Kumar Ray	2015	Sociology

## **Annexure 2: Agenda Points**

### **Agenda points for the Evaluation of National Research Professorship Scheme**

#### **1. Eligibility**

- Selection procedure of the beneficiaries.
- Application procedure of the scheme.
- Details about selection committee.
- Basis/ Criteria of the second tenure approvals.
- Sanction strength more than the number of approvals.

#### **2. Selection Procedure**

#### **3. Finances**

- Criteria for deciding current honorarium, pension, contingency fund.
- Bills provided by the beneficiaries.

#### **4. Annual Reports**

- Structure of Annual Reports.
- Assessment process of Annual Reports.
- Submission timeline

#### **5. Duties and Responsibilities of the Beneficiaries**

- Duties assigned to them.

#### **6. Current Beneficiaries list**

### **Annexure 3: Questionnaire**

#### **Project Name: Third Party Evaluation of National Research Professorship Scheme (NRP)**

1. Name of the Honouree:
2. How did you get to know about the NRP Scheme?
3. Do you think there should be some eligibility criteria and application procedure under NRP Scheme?
4. Do you think the visibility factor of the scheme needs improvement or enhancements nationally or internationally? If yes, please suggest how?
5. What is your opinion on the current honorarium, pension, and contingency funds?
6. Do you have any suggestions for changes in the financial assistance under any of the following heads:
  1. Honorarium
  2. Pension
  3. Contingency Fund
7. Do you think there may be financial assistance for any miscellaneous expenditure as well? If yes, please suggest.
8. What is your opinion on the roles/ responsibilities of NRPs under the scheme?
9. What kind of roles and responsibilities may be assigned to the NRPs according to you under the scheme?
10. Do you think the annual progress report submission which highlights the yearly contribution of the NRPs should be made mandatory?
11. How has NRP scheme facilitated the contribution in your respected field?
12. Do you think there may be any amendments in the scheme? If yes, what recommendations and improvements would you suggest?
13. Do you think the Scheme should be field specific?
14. May the NRP scheme be merged with other schemes?
15. Do you think a common meeting of all the NRPs with the MHRD may be organized on quarterly/ yearly basis?

**Annexure 4:**

The contact and Address details of all the NRPs approached by the IIPA study team during the study has been given below:

<b>SI. No.</b>	<b>Name of the NRP</b>	<b>Address</b>	<b>Phone Number</b>
<b>1</b>	<b>Dr. Jayant Kumar Ray</b>	<b>309, Jodhpur Park, Kolkata</b>	<b>9836063408</b>
<b>2</b>	<b>Dr. Suryakant Bali</b>	<b>ND-23, Vishakha Enclave, Delhi</b>	<b>7827807777</b>
<b>3</b>	<b>Dr. S.L. Bhyrappa</b>	<b>1007, Udaya Ravi Road, Mysore</b>	<b>9986688607</b>
<b>4</b>	<b>Dr. Ashok Gajanan Modak</b>	<b>Flat No. 101, Kingston Building, Powai, Mumbai</b>	<b>9621560373</b>
<b>5</b>	<b>Dr. P.N. Tandon</b>	<b>Jagriti Enclave, Vikas Marg Ext.</b>	<b>011-22163272</b>
<b>6</b>	<b>Dr. M.S. Valiathan</b>	<b>Manipal</b>	<b>9448381547</b>
<b>7</b>	<b>Dr. C.N.R. Rao</b>	<b>Bangalore</b>	<b>8023653075</b>
<b>8</b>	<b>Dr. Andre Beteille</b>	<b>69, Jor Bagh, New Delhi</b>	<b>9910041748</b>
<b>9</b>	<b>Dr. M.A. Mashelkar</b>	<b>Pune</b>	<b>9960377577</b>
<b>10</b>	<b>Dr. Goverdhan Mehta</b>	<b>Hyderabad</b>	<b>8008393737</b>

## **Annexure 5:**

### **NRP REPORT 1**

**Professor M. S. Valiathan**

**National Research Professor**

**Name of the National Research Professor: Dr M. S. Valiathan**

**Date of Appointment: 1st January 2006.**

**Sanction Letter No. & Date:** [D.NO. F 3-2/2000-U. II dated 6/12/2005]

Date of Renewal: 1st January 2011

**Sanction Letter No. & Date:** [D.O. No. 3-7/2010-U. II dated 22/12/2010]

Address: Manipal School of Life Sciences, Dr TMA Pai Planetarium Complex,

Manipal Academy of Higher Education (MAHE), Manipal – 576104

Theme of the National Professorship: Ayurvedic Biology

### **Background:**

From 1974-1994, I served as Professor of Cardiac Surgery and Director of the Sree Chitra Tirunal Institute for Medical Sciences and Technology (Chitra Institute), Thiruvananthapuram, when it evolved from an empty building under Kerala Government into an Institute of National Importance by an Act of Parliament (1980) and renowned nationally for pioneering the joint culture of medicine and technology.

On attaining 60 years, I left Chitra Institute and moved to Manipal as the first Vice Chancellor of Manipal Academy of Higher Education (MAHE) in 1994 for a five-year term. This was the early phase of MAHE when it made quick progress.

After my term as Vice Chancellor ended in 1999, I was awarded a Senior Fellowship by the Homi Bhabha Council to carry out a study of Caraka Samhita and present a redacted version of this foundational text of Āyurveda for students of Science, Medicine and Āyurveda. I freshened my knowledge of Sanskrit and learnt the Samhita from a reputed Acharya – Shri Raghavan Thirumulpad of Kerala – over a two-year period. My “Legacy of Caraka” was published by

Orient Blackswan in 2003 (Pages: 634), which received a good welcome. The response from scholars was sufficiently encouraging for me to take up the study of the classics of Suśruta and Vāgbhaṭa and complete the study of the Great three (Bṛhatrayī) of Āyurveda. 2.

During the study of the Āyurvedic classics, I realised that the research in Āyurveda throughout the 20th century had been limited to herbal drugs and had ignored the study of the concepts and procedures in Āyurveda with the tools of modern science especially molecular biology and immunology. I termed this virgin field “Āyurvedic Biology (AB)” and the Indian Academy of Sciences, Bangalore published my essay “Towards Āyurvedic Biology” as a Decadal Vision Document in 2006. In the same year I was honoured to be made a National Research Professor by the Government of India for a five year term and the Office of the Principal Scientific Adviser to the Government of India (PSA to GOI) approved the funding of four research projects suggested in the Vision Document under the “Directed Basic Research” scheme. I decided that the central objective of my Professorship would be to promote high quality research in AB and making it eligible to become a new branch of science.

A Science Initiative in Āyurveda (ASIIA): In the long search for support for research in AB, help came when the Principal Scientific Advisor to the Government of India decided to provide initial support to a few projects which had been clearly identified in the Decadal Vision Document “Towards Āyurvedic Biology”. The scheme supported by PSA’s Office was termed “A Science Initiative in Āyurveda (ASIIA)”.

The response to research in this new area was highly encouraging as shown by the list of major science institutions and Āyurvedic institutions which took part in it:

### **Science institutions**

ACTREC, Cancer Research Institute (Tata Memorial Centre), Mumbai

CSIR - Central Institute of Medicinal and Aromatic Plants, Lucknow

CCMB - Centre for Cellular and Molecular Biology, Hyderabad

Indian Institute of Science, Bangalore

Indian Institute of Technology, Kharagpur

Jawaharlal Nehru Technological University, Hyderabad

Manipal Academy of Higher Education, Manipal

Sinhagad Institute, Pune

TN Medical College and BYL Nair Hospital, Mumbai

**Āyurvedic Institutions:**

Arya Vaidya Sala, Kottakkal

Foundation for Revitalisation of Local Health Traditions, Bangalore

Institute Medical Sciences, Banaras Hindu University (IMS-BHU), Varanasi

RA Podar Ayurved Medical College & Hospital, Mumbai

Shri Dharmasthala Manjunatheswara College of Āyurveda, Udupi

The approach of ASIIA was unprecedented. In terms of the reputation of participating institutions, scientists and Vaidyas taking part in research projects and the papers published, ASIIA was impressive enough for Department of Science and Technology (DST) to take over the scheme under a “Task Force in Āyurvedic Biology” in 2011 within the jurisdiction of Science and Engineering Research Board (SERB).

While ASIIA was making progress, I completed the study of Suśruta Samhita and Ashtāṅga Hṛdaya of Vāgbhaṭa, which were published as “The Legacy of Suśruta” [Pages: 830] and The Legacy of Vāgbhaṭa [Pages: 946] by Orient Blackswan who had published my “The Legacy of Caraka” earlier.

**Task Force in Āyurvedic Biology:** The Task Force was set up by DST in 2011 with representatives of DST, eminent scientists and Āyurvedic physicians at the national level as follows:

- 1) Prof. M. S. Valiathan, National Research Professor, Manipal, Chairman
- 2) Dr. T Ramasami, Secretary, DST, Ex-officio – Member
- 3) Prof. M. R. S. Rao, President, JNCASR, Bangalore, Member
- 4) Prof. S.S. Agarwal, (Former Director, SGPGI, Lucknow), Member
- 5) Professor RH Singh, Varanasi, (Former Vice-Chancellor, Member Āyurvedic University), Jodhpur

6) Dr. M.S. Baghel, Director, I PG TRA, GAU, Jamnagar, Member

7) Dr G. C. Mishra, Former Director, NCCS, Pune, Member

8) Dr. B. Harigopal, Head, SERC, DST. Member

9) Dr. B. P. Singh (DST) Member Secretary

10) Dr. A. B. P. Mishra (DST) Convener

The Task Force is listed on the website of SERB and is fully functional now. It receives research proposals from all over India including scientific, Āyurvedic, veterinary and educational institutions. These include top institutions such as IITs, Central Universities, AIIMS and Āyurvedic institutions.

## **Annexure 6:**

**Professor P.N. Tandon**

**Report of work carried out May 2014 to May 2019 as National Research Professor**

### **BOOKS & MONOGRAPHS: -**

#### **TEXTBOOKS AND MONOGRAPHS: -**

1. Tandon P.N, Ramamurthi R, Jain PK: (Eds) Manual of Neurosurgery, Jaypee Medical Publishers, New Delhi, 2014
2. Tandon P.N: My Tryst with Bio-Medical Research. National Academy of Science, India, Allahabad, 2015
3. Sharma M, Tandon P.N, Govil G: Festschrift Dedicated to Professor MGK Menon: National Academy of Sciences India, Allahabad, 2016
4. Jana Nihar, Tandon P.N, Basu Anirban (Eds) Inflammation: The Common Link in Brain Pathologies. Springer Science & Business Media, Singapore, 2016
5. Sahni SK, Tandon P.N(Eds): Indian National Science Academy's Inspirational Journey in 75 years. Indian National Science Academy, New Delhi, 2017.
6. Tandon P.N Sharma M: Basic Research- It's Role in National Development: Proceedings of the Symposium. National Academy of Sciences, India, Allahabad, 2018.
7. Tandon P.N: Closed Doors, Open Windows Autobiography of a Neurosurgeon chasing his dreams. Wolters Kluwer Health (India), 2019

#### **CHAPTERS:-**

1. Tandon P.N.: Pande Anil: Tuberculosis of the Central Nervous System. In Textbook of Neurosurgery 3rd Edition. (Eds). P.N. Tandon and Ravi Ramamurthi, 3 Volumes: Jaypee Brothers Medical Publishers (P) Ltd., New Delhi 2012 pp 725-741.
2. Tandon P.N.: Pande Anil: Tuberculous meningitis. In Textbook of Neurosurgery 3rd Edition. Eds. P.N. Tandon and Ravi Ramamurthi, 3 Volumes: Jaypee Brothers Medical Publishers (P) Ltd., New Delhi 2012 pp 742-752.

3. Tandon P.N.: Neural Transplantation and Stem Cell. In Textbook of Neurosurgery 3rd Edition. Eds. P.N. Tandon and Ravi Ramamurthi, 3 Volumes: Jaypee Brothers Medical Publishers (P) Ltd. New Delhi 2012 pp 2126-2140.
4. Tandon P.N: Biology of neuroinflammation: In Inflammation the Common Link in Brain Pathologies (eds) Jana N, Tandon P, Basu A Springer Science & Business Media, Singapore 2016 PP1-16.
5. Tandon P.N.: Prof M.G.K Menon: A man so rare. In Sharma M, Govil G, Tandon P.N: Festschrift dedicated to Prof MGK Menon, National Academy of Sciences, India 2016.
6. Tandon P.N.: Mind and Body: Interrelated and Interdependent. In Mind and Body in Health and Harmony in Asian Systems of Medicine. (eds) Ranjit Roy Choudhary and Kapila Vatsayan, Primus Books, Delhi 2017 pp 131-38
7. Tandon P.N.: Biomedical Ethics. In Textbook of Biotechnology (eds) H.K Das Wiley India Pvt.. Ltd. New Delhi 2017 pp 1022-26
8. Tandon P.N.: Prof G.P Talwar: An ever-green scientist. In Molecular Medicine: Bench to Bedside and Beyond (eds) S.K Gupta and NK Lohiya. IASSRF Publ. Jaipur 2018 PP 20-21.
9. Tandon P.N.: Basic Science: A clinician's perception in: Proceedings of the Symposium on Basic Research. It's Role in National Development (eds) P.N Tandon, Manju Sharma, The National Academy of Sciences India, 2018 PP 64-73.

#### **PAPERS/ PUBLISHED**

1. Sarat Chandra, HY, Tandon PN: Biomedical Research Ethics in India: A Report: International Bioethics Committee, UNESCO, Paris (2014).
2. Tandon P.N (2015): Neurosurgical education: Some thoughts Neurol India; 63,464-467.
3. Tandon P.N (2015): Impact sans Impact Factor Natl. Acad Sci Lett 38,521-527.
4. Tandon P.N (2016): Cell therapy for neurological disorders: the elusive goal. Neurol India
5. Tandon P.N (2016): Obituary: Prof. Noshir Hormusjee Wadia: A doyen of Indian Neurology. Neurol India 64,845-846.
6. Tandon P.N Singh NC (2016): Educational neuroscience: Editorial Ann Neuroscience 23,63-65,2016.

## **Annexure 7:**

**Professor R.A. Mashelkar**

**National Research Professor Report – 2011-2020**

### **Publication during the Period**

1. Inclusive Innovation: Getting R.A. Mashelkar The India Idea, More from Less for More L.K. Sharma (Ed.), Wisdom Tree, New Delhi, p.19-22, 2011
2. Rapid self-healing hydrogels Ameya Phadke Proc.National Academy of Chao Zhang Sciences, USA, 109, (12), Bedri Arman 4383-4388 (2012) Cheng-Chih Hsu R.A. Mashelkar Ashish K. Lele Michael J. Tauber Gaurav Arya Shyni Varghese
3. A cholesterol-tethered platinum Poulomi Sengupta Proc. National Academy of II-based supramolecular nanoparticle Sudipta Basu Sciences, USA, 109, (28), increases antitumor efficacy and Shivani Soni 11294-11299 (2012) reduces nephrotoxicity Ambarish Pandey Michael Oh, Kenneth T. Chin Abhimanyu S. Parashar Bhaskar Roy Sasmit Sarangi Yamicia O Connors Venkata Sabiseti Jawahar Kopparam Chitra Amarasiriwardena Innocent Jayawardene Nicola Lupoli Daniela M. Dinulescu Joseph V Bonventre Raghunath A Mashelkar Shiladitya Sengupta
4. India's Science for All; Academy R.A. Mashelkar Science, Vol. 335 24, p.891, (2012)
5. Bursting with new ideas R.A. Mashelkar Business Today (India & Innovation) (8 January 2012)
6. Innovation's Holy Grail in C.K. Prahalad Harvard Business Review, 'Inspiring and Executing Innovation' R.A. Mashelkar Boston, 2011, pp 1-24
7. Leading Institutions & R.A. Mashelkar Sage Publications, Thought Leadership, in 'Leaders, New Delhi, 2012, pp, 109- On Leadership: Insights from 129. Corporate India'
8. Innovation Economy: The Indian R.A. Mashelkar Artha Vijana Challenge and Opportunity 54 (4), 2012, pp. 409-419
9. Governance in Education: R.A. Mashelkar The Journal of Governance The Indian Challenge Vol.6, pp 9-17, January2013

10. Game Changing Chemical Engineering R.A. Mashelkar Chemical Engineering For our Sustainable Future Digest, pp 33-36 (Sept.2013)
11. Science-led Innovation in R.A. Mashelkar Science Advisory Council Science in India: Decade of to the Prime Minister Report, Achievements and Rising 2013, sactopm.gov.in Aspirations
12. Innovation in Education & R.A. Mashelkar CASS Journal, Vol.1, No.1 Education in Innovation pp. 17-22, January-March2014
13. India's tech opportunity: R.A. Mashelkar, [www.project-syndicate.org](http://www.project-syndicate.org): transforming work, empowering Anu Madgavkar commentary people December, 2014
14. 'Indovation' for Affordable Excellence R.A. Mashelkar Current Science, Vol.108. No.1, pp 7-8, 10 Jan. 2015
15. What will it take for Indian science, R.A. Mashelkar Current Science technology & innovation to make Vol.109, No.6, pp 1021- global impact? 1024, 25 Sept. 2015
16. Impact of science, technology and R.A. Mashelkar AI & Soc., Springer, Innovation on the economic and pp 1-9, 30 November 2015, political power link.springer.com
17. Saving humanity: More from Less R.A. Mashelkar How to Save Humanity for More People Founder of Basics.IS E-Book, Vol.1, pp 69-74, 2015
18. Technology 2050: A Potential R.A. Mashelkar Emerging Markets through Study of Prospects for Global 2050, Eds. Harinder Kohli Landscape. Oxford University Press (in press)
19. A reporter nanoparticle that Ashish Kulkarni Proceedings of US National Monitors its anticancer efficacy Poornima Rao Academy of Science, USA In real time Aaron Goldman Vol.113, (15), April, 2016.Navya Korimerla Raghunath Mashelkar Shiladitya Sengupta
20. The Future of Technology & Jobs R.A. Mashelkar Ubiquity Volume 2016, Number April (2016), Pages 1-12 ubiquity.acm.org
21. Emergence of India as a R.A. Mashelkar India Now, Business and Global R&D hub Aravind Chinchure Economy August-September 2016
22. Saving Humanity: More from R.A. Mashelkar Article contributed to the Less for More People Book How to Save Humanity October 2016