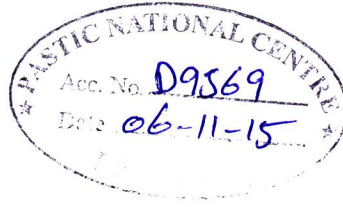


ANNUAL REPORT

2010 - 2011



Pakistan Science Foundation
Islamabad



ANNUAL REPORT

2010-2011



PAKISTAN SCIENCE FOUNDATION
1 - Constitution Avenue
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ACRONYMS

AGR	Agricultural Sciences
AJK	Azad Jammu and Kashmir
AKU	The Agha Khan University, Karachi
B	Balochistan
BIO	Biological Sciences
BIOTECH	Biotechnology
C	Center
CDWP	Central Development Working Party
CEMB	Center of Excellence in Molecular Biology, Lahore
CEME	College of Electrical and Mechanical Engineering, Rawalpindi
CEWRE	Center of Excellence in Water Resources Engineering, Lahore
CIIT	COMSATS Institute of Information Technology
COMSATS	Commission on Science and Technology for Sustainable Development in the South
COMSTECH	OIC's Standing Committee on Scientific and Technological Cooperation
DDWP	Departmental Development Working Party
EARTH	Earth Sciences
ENG	Engineering Sciences
ENVR	Environmental Sciences
F	Frontier (Khyber Pakhtoon Khwa)
F-PU	Peshawar University, Peshawar
GCU	Government College University, Lahore
GU	Gomal University, D.I. Khan
KU	Karachi University, Karachi
MED	Medical Sciences
NARC	National Agricultural Research Center
NIBGE	National Institute for Biotechnology and Genetic Engineering, Faisalabad
NNSFC	National Natural Science Foundation of China
NSLP	Natural Sciences Linkage Programme
NSTC	National Science and Technology Commission
P	Punjab
P-AU	Agriculture University, Faisalabad.
P-PU	Punjab University, Lahore
PHYS	Physics
PINSTECH	Pakistan Institute of Nuclear Science and Technology, Islamabad
PCCC	Pakistan Central Cotton Committee, Sakrand.
PSDP	Public Sector Development Working Party
S	Sindh
SALU	Shah Abdul Latif University, Khairpur
SUIT	Sindh Institute of Urology & Transplantation, Karachi
SU	Sindh University, Jamshoro
SSGC	Sui Southern Gas Company
WWF	World Wildlife Fund for Nature

EXECUTIVE SUMMARY

PAKISTAN SCIENCE FOUNDATION (PSF)

Pakistan Science Foundation (PSF) is apex body for promotion and funding of scientific and technological research and other related activities in the country. The tasks undertaken by the Foundation for the performance of its statutory functions are divided into two broad categories viz., Science Promotion and Science Popularization. Some of these activities pertaining to above mentioned categories are undertaken by Pakistan Museum of Natural History (PMNH) and Pakistan Scientific and Technological Information Centre (PASTIC), the two subsidiary organizations of PSF, while others are performed by PSF Science Wing and are reflected as under:

RESEARCH SUPPORT

Research Support is the principal programme of the Foundation for the promotion of basic and applied research. During 2010-2011, a total of 276 projects in the fields of Agriculture, Biology, Biotechnology, Chemistry, Computer Sciences, Earth Sciences, Engineering, Medical Sciences and Physics remained under consideration. Out of these, 117 projects were under-process and 45 were approved by the Foundation during the year at a total cost of Rs.68.23 million, whereas, an amount of Rs.25.07 million was released on account of first installment of these approved projects.

A total of 106 technical reports (semi-annual/annual/final) of on-going research projects were sent to the subject experts for review/assessment. An amount of Rs.12.71 million was released on account of due installments of the approved projects budget and evaluation fee of these projects. Following all the procedural requirements, eighteen (18) research projects were concluded and finally were adopted by the recommendations of the respective Technical Committees. Principal Investigators got published 48 research papers in different national/international journals. Additionally, 06 Ph.D and 08 M.Phil degrees were awarded to the Research Associates employed in these research projects.

Focusing on collaborative research and strong industrial linkages, R&D-Industry Programme (previously called Industrial Linkages Programme, ILP) is bringing together researchers, end-users and the funding institutions at one platform to create an environment of a unified

approach to identify and solve industrial problems through applied research and technology transfer mechanism.

During the year, with a budget of Rs.2.139 million, a project of applied nature was initiated with GIK Institute of Engineering Sciences & Technology to diversify energy resources in transport sector through production and practical implication of biodiesel. Four new projects were also registered under R&D-Industry Programme and are under review process.

Pak-US Natural Sciences Linkage Programme (NSLP) Endowment Fund

PSF maintains an endowment fund under Pak-US Natural Sciences Linkages Programme (NSLP) to boost the research in agriculture sector in the country. During the report period, 77 research proposals were submitted by various P.Is to NSLP. Out of these 34 projects were presented in three different Technical Committee meetings. Technical Committees recommended 11 new projects for a total cost of Rs.29.4 million. Currently, 29 ongoing projects are being run at different Universities and R&D organizations across the country under this programme. An amount of Rs.25.9 million was released on account of due installments and evaluation fee of on-going projects. During the reporting period one project was completed.

SCIENCE PROMOTION ACTIVITIES

During the report period, an amount of Rs.6.43 million was released to eight R&D organizations for enhancement of their research capabilities through procuring equipment and an amount of Rs.1.72 million was released to various institutions for organizing 22 conferences, seminars, and workshops on important scientific topics. Additionally, Rs.2.40 million were released to 25 societies/journals for their regular activities and Rs.1.08 million were paid to 12 Ph.D/M.Phil students on account of research fellowships for carrying out their Ph.D/M.Phil research at their parent institutions.

SCIENCE POPULARIZATION

This section popularizes science by increasing its awareness in the society and development of scientific culture in the country. Various activities carried out for this purpose during the year 2010-11 are summarized as below;

Science Caravan, the Mobile Science Exhibition is designed to increase public awareness about science and to motivate the younger generation towards study of science. At present, Nine Science Caravan Units are in operation. Eight units are stationed in the four provinces (two in each province) and one Federal Unit at Islamabad. All Caravan Units organized Caravan Exhibitions at 40 centers for 480 days in various schools countrywide. More than 145,386 students of 440 schools visited these exhibitions.

The Foundation in collaboration with Boards of Intermediate and Secondary Education organized the 20th Intra- and Inter Board Science Essay and Poster Competitions. The theme was "*Role of Technology Parks in National Development*". Across the country 2200 students participated in the competition; among them fifty six (56) students were awarded with prizes by PSF. Similarly, 20th Science Poster Competition was held on the theme "*Biodiversity of Pakistan*" and forty eight (48) students were awarded with Cash prizes and Certificates.

As a routine activity, 18,000 copies of Popular Science magazine "*Monthly Global Science*" were distributed to 1500 schools during the report period. In addition, more than 12000 copies of scientific brochures were also distributed among the students through science caravans. Scientific Journal "*The Fountain*" published by The Light Publishing, Turkey was provided to all Caravan units, PMNH and PASTIC offices.

The Foundation provides Financial Assistance to High Schools especially of rural areas, for strengthening of the Science Laboratories and to S&T Organizations for organizing their science popularization activities. During the year, laboratories of 13 schools were improved. A total of Rs. 0.9 million was provided to Six S&T organizations for activities related to popularization of science.

PSF has signed MoU with the Academie des Sciences, France for Improvement of Science Teaching through Inquiry Based Science Education (IBSE)-La main a la pate (LAMAP). Mr. Jean Saleneon, President, Academie des Sciences, France and Dr. Manzoor H. Soomro, Chairman, PSF signed the MoU at Paris on 15 Dec, 2010. First International Training Workshop for Pakistani Teachers was held at Islamabad during 25-30 Oct, 2010. Two French experts imparted training to teachers from 27 schools of Rawalpindi/ Islamabad and PSF officials. The 2nd International Workshop on IBSE was organized from April 25 to May 04, 2011 at Islamabad in collaboration with Academie des Sciences, France. Thirty two (32)

teachers from 27 schools of Rawalpindi, Islamabad and surrounding areas participated in the training workshop. Additionally, PSF has established Science Clubs in 15 schools and a Grant amounting to Rs.25,000/- was provided to each school in this regard.

During the year 2010-11, PSF in collaboration with Embassy of France organized International Traveling Expo on Biodiversity entitled "Biodiversity is Life- It's Our Life" from 14th January to 31st March 2011. It was prepared by UNESCO, Centre Sciences-France & partners and was arranged with the support of Embassy of France in Pakistan. More than 38,000 students, teachers and citizens participated in the EXPO travelling through 5 cities.

World Science Day for Peace and Development was celebrated on Nov. 10, 2010 to commemorate the national as well as international commitment to science and to stress the use of science for the benefit of the society. In this connection Convention of Scientists was organized at PSF Auditorium and "Dr. Z. A. Hashmi Gold Medals" were awarded along with cash prizes (Rs.100,000/-) to each two most productive P.Is of PSF funded projects.

INTERNATIONAL LIAISON

During report period, 30 proposals for S&T collaboration were forwarded by PSF, PASTIC and PMNH to MoST for consideration. Regarding already signed MoU between PSF and National Natural Science Foundation of China (NNSFC), revival of activities initiated between Pakistan and NNSFC for sharing of knowledge and expertise.

Efforts have been made to meet all the procedural/ official requirements to establish ECO Science Foundation as a specialized agency of ECO to promote scientific research and work as a pool of highly skilled scientific and technological manpower among member states. In order to review the progress in institutionalization of ECO-SF, 2nd Expert Group Meeting (EGM) was held in Tehran in August 2010. First Board of Trustees Meeting was to be held in Pakistan in follow-up of 2nd EGM, but could not be organized in the scheduled time line.

PLANNING AND DEVELOPMENT

During the report period, an amount of Rs.1.0 million was received under PSDP 2010-11 and utilized for payment of Travel grants to Scientists/Technologists, and other miscellaneous expenses. Under the "Aghaz-e-Haqooq-e-Balochistan Package" of the Government, PSF prepared two development projects for awareness of scientific & technological advancement

among students and general public of Balochistan. After obtaining concurrence of the Government of Balochistan, the projects titled “Establishment of two Science Centers in Balochistan” and “Establishment of 50 Science Clubs in High Schools of Balochistan” were submitted to MoST for consideration and approval by the relevant forums (CDWP/DDWP). PSF was nominated by MoST as focal organization to coordinate with S&T organizations for provision of relevant material to Lok Virsa on behalf of MoST. A number of reports/documents regarding PSDP projects of PSF, PMNH and PASTIC as well as Non-Development activities were prepared & submitted to MoST.

PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)

PMNH has four principal divisions namely Botanical Sciences, Zoological Sciences, Earth Sciences and Public Services. The first three divisions are engaged in the collection, identification and research activities pertaining to plants, animals and mineral resources of Pakistan, respectively; while the latter is responsible for mass education and popularization of natural history. The scientists conducted field studies in various localities of Sindh, Punjab, Khyber Pakhtoonkhwa and Gilgit-Baltistan. Some 3000 specimens of animals, plants, rocks, minerals and fossils were collected along with field data and photographs. These specimens were preserved, identified, catalogued and stored in PMNH reference repository. Research carried out by PMNH scientists resulted in the publication of 35 research articles in reputed national and international journals. One international collaborative research project with Switzerland was continued. Several other national collaborative research projects were carried out during the reporting year.

The main objectives of PMNH include research and public education on the natural resources of the country. This year PMNH organized a National Symposium on Biodiversity of Pakistan 2011, wherein, 160 biologists across the country presented 84 research papers. PMNH also organized a 2-days’ Female Teachers Training workshop on the occasion of National Women Year and to celebrate International Biodiversity Day. PMNH also organized 2-days’ workshop on Civil Engineering Materials-Rocks/Minerals at NUST, Islamabad. Field trips were organized with Bahria University and Geo TV. PMNH organized the stalls in CDA, Spring Tree Plantation campaign, 2011. Participated in Spring Flower Festival, 2011 at PMAS-Arid Agriculture University Rawalpindi and at National University of Science &

Technology (NUST), Islamabad. PMNH was visited by Secretary, Ministry of Science & Technology Mr. Irfan Nadeem Syed, along with French delegation in Pakistan and Secretary General, ECO H.E. Mr. Mohammad Yahya P. Maroofi in connection with Expo on Biodiversity.

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE (PASTIC)

Pakistan Scientific and Technological Information Centre (PASTIC) is the premier organization in the field of S & T information management & dissemination. During 2010-11, PASTIC stalls and awareness seminars about its services were organized at various universities and other institutions. Placement of PASTIC boxes in some libraries and distribution of PASTIC posters and leaflets to university departments were also undertaken. A total of 48 stalls were arranged at various departments of 19 universities in several major cities, 9 R&D organizations/institutes and also at some conferences/seminars. In addition, 16 awareness seminars were organized at different places about PASTIC and its services. The updating of in-house databases such as; Serial Holdings of Libraries of S&T Institutions of Pakistan, Research Published in Pakistan and Scientific Periodicals of Pakistan remained in progress.

During the report period, a total of 699 articles were supplied to 209 researchers under the Document Supply Service, and 6,55,962 references/abstracts from International Bibliographic Databases, both online and offline in all major disciplines of Science and Technology were supplied to 4243 researchers/users on their request under the Bibliographic Information Service.

PASTIC regularly publishes abstracting journal entitled "Pakistan Science Abstracts (PSA) in ten different scientific disciplines. Six issues of bimonthly Trade and Technology news e-bulletin entitled "Technology Roundup" were published online. For a result oriented and coordinated University-Industry Programme, seminars, symposia and exhibitions were organized at the Chambers of Commerce & Industry in Rawalpindi, Faisalabad, Lahore, Karachi and Peshawar.

A total of 864 users visited PASTIC Science Reference Library for reference & reading etc. Besides, library received 382 issues of national and international journals in exchange of Pakistan Science Abstracts, under international cooperation activities and on gratis basis. In addition, 117 books, 48 reports and miscellaneous documents were acquired, processed and shelved for use. Under other library activities, "Bulletin of Fresh Arrivals" was published regularly for current awareness purpose. Under the development project entitled "Strengthening and Enhancement of Reprographic Services of PASTIC", machines were purchased and installed for enhancing the printing facility. During report period, 95 printing jobs of nine R&D organizations were performed.

PASTIC also acts as the National Focal Point for International/Regional Information Networks, like SAARC Documentation Center, WHO/CEHANET and is the national distributor of UNESCO developed library management software "WINISIS". During 2010-11, WINISIS packages were supplied to 78 Librarians and other information professionals from 21 organizations and two training workshops on this package were also organized. Four officers of PASTIC, MoST and PCST availed the training offered by SAARC Documentation Centre. Proposals for bilateral cooperation in the field of S&T information exchange with Thailand, Italy, Egypt and China were prepared and submitted to MoST for further processing.

PASTIC organized 28 seminars, workshops and symposia on various themes related to Information Management, Coordination and Services etc. PASTIC signed two MoUs related to Technology, Commercialization and Development with two local organizations/Institutions. A total of 78 Librarians and other information professionals were trained in the area of automation of libraries and modern information handling techniques.

INTRODUCTION

Pakistan Science Foundation was established on June 30, 1973 under the Pakistan Science Foundation Act No. III of National Assembly (**Annexure-I**) as an autonomous body to promote and finance scientific and technological activities having a bearing on the socio-economic needs of the country. The tasks undertaken by the Foundation for the performance of its statutory functions are divided into following three broad categories:

- i) Science Promotion supports basic and fundamental as well as applied research involving researchers/academia at universities and R&D organizations focusing socio-economic needs/development of the country.
- ii) Science Popularization endeavoring to image scientific ideas to grasp the concept of fundamental science.
- iii) Science Centers to encourage all segments of society in thinking, understanding and exploring science.

Under the Act, the Foundation has been entrusted to carry out the following functions:

- i) Establishment of comprehensive scientific and technological information and dissemination centers.
- ii) Promotion of basic and fundamental research in universities and other institutions on scientific problems relevant to the socio-economic development of the country.
- iii) Utilization of the results of scientific and technological research including pilot plant studies to prove the technical and economic feasibility of processes found to be promising on a laboratory scale.
- iv) Establishment of science centers, clubs, museums, herbaria and planetaria.
- v) Promotion of scientific societies, associations and academies engaged in spreading the cause of scientific knowledge in general or in the pursuit of a specific scientific discipline or technology in particular.
- vi) Organization of periodical science conferences, symposia and seminars.
- vii) Exchange of visits of scientists and technologists with other countries.
- viii) Grant of awards, prizes and fellowships to individuals engaged in developing processes, products and inventions of consequence to the national economy.
- ix) Special scientific surveys not undertaken by any other organization and collection of scientific statistics related to the scientific efforts of the country.

The Foundation shall also:

- i) Review the progress of scientific research sponsored by it and evaluate the results of such research.
- ii) Maintain a National Register of highly qualified and talented scientists/engineers and doctors both in and outside Pakistan, and to assist them in collaboration with concerned agencies to seek appropriate employment.
- iii) Establish liaison with similar bodies in other countries.

The activities performed under the above mentioned statutory functions are as under, however, the details are given in different chapters:

ACTIVITIES AND PROGRAMMES

The activities and programmes undertaken by the Foundation to perform its statutory functions can be divided into the following four categories:

- i. Promotion and Financing of Scientific Research in the Country and the Utilization of the Research Results.
- ii. Promotion and Popularization of Science in Society.
- iii. International Liaison.
- iv. Establishment of Comprehensive Scientific and Technological Information Dissemination Centers.

The main functions of the Foundation i.e., research support and science popularization etc., are performed by the Science Wing of the Foundation and their detail is given as under:

Research Support is performing the following activities:

1. Research Support
 - a) Grants for Research Projects
 - b) Grants for Institutional Support
2. Research Evaluation
3. Promotion/funding of Scientific Societies/Learned Bodies
4. Funding of Conferences, Symposia, Seminars & Workshops
5. Travel Grants
6. International Liaison
7. Awards and Fellowships
8. Survey and Statistics
9. Scientists Pool
10. Innovations & Inventions
11. Planning and Development Programme

Science Popularization carries out science popularization activities including Science Caravans, Science Clubs, Science Fairs and holding of Popular Science Lectures, Workshops, Conferences and Symposia.

Pakistan Museum of Natural History (PMNH) is another subsidiary organization of PSF, established in 1979 to serve the national needs in the vitally important areas of research, conservation and education involving Pakistan's heritage of natural resources. The Museum is a National Repository for permanent storage of plants, animals, rocks, minerals and fossils of the country.

Pakistan Scientific and Technological Information Centre (PASTIC); a subsidiary organization of PSF, performs as Scientific and Technological Information Dissemination Center with its sub offices in all provincial capitals of the country.

I. PAKISTAN SCIENCE FOUNDATION (PSF)

1.0 RESEARCH SUPPORT

1.1 Research Funding

1.1.1 Research Projects Funded

Research Support (Science Promotion) is the principal programme of Pakistan Science Foundation for the promotion of basic and applied research, focusing socio-economic development of the country. The criteria for funding of research projects by the Foundation include the competence of the scientific personnel to carry out research, institutional capabilities, i.e. availability of basic equipment and laboratory facilities, scientific and technical merit of the proposed research projects and likelihood of completion of the proposed research within the stipulated time. Each proposal, after getting reviewed from subject expert in the particular field, is placed before the relevant Technical Committee for technical and fiscal evaluation and recommendations regarding provision of funds under various heads of expenditure proposed by the researchers. The proposal, if recommended by the Technical Committee, is then submitted to PSF Executive Committee for final approval.

a) Under-Process Projects

During the report period, 276 research proposals remained under active consideration of the Foundation. Out of these 117 projects were under-process and 44 of these were newly approved by the Foundation at a total cost of Rs. 68.23 million (**Annexure-II**) whereas Rs.25.07 million were released on account of first installments of these approved projects.

b) On-Going Projects

During report period 159 projects were on-going and their 106 progress reports were received and evaluated as per PSF procedure. It may be mentioned that due installments of on-going projects are released only if the interim progress of the projects is satisfactory. An amount of Rs. 12.71 million was released on account of due installments and evaluation fee of ongoing projects. Detail of the semi-annual, annual and final reports is given in (**Annexure-III**).

c) Completed Projects

Eighteen (18) research projects funded under regular non development budget were completed. The subject experts evaluated the Final Technical Reports of these projects, which

were subsequently considered and adopted by respective PSF Technical Committees. A list of the completed projects followed by their scientific output is given below:

S. No.	Project No.	Project Title
1.	PSF/Res/S-PCSIR/Bio (221)	Preparation of Products of Economic Importance (Chitin & Chitosan) from Shellfish Waste.
2.	PSF/Res/S-SU/Bio (287)	Formulation of Low Cost Quality Fish Feed from Indigenous Raw Material and Its Effect on Growth and Survival of Major Carps.
3.	PSF/Res/P-AU/Bio (355)	Pharmacological Evaluation of Two Anti-Hyperlipidaemic Indigenous Medicinal Plants in Albino Rabbits and Determination of their Mechanisms of Actions.
4.	PSF/Res/P-UAF/Bio (408)	Preparation and Characterization of Legumes Protein Isolates to Improve Nutritional and Functional Properties of Baked Products.
5.	PSF/Res/S-NIA/Biotech (134)	Use of Induced Somatic Mutation and Biotechnology for the Genetic Improvement of Sugarcane (<i>Saccharum Sp.</i> Hybrid).
6.	PSF/Res/AJK-UAJK/Biotech (196)	Genetic Analysis and Field Evaluation of Potato (<i>Solnum tubersum</i> l.) Genotype in Azad Kashmir.
7.	PSF/Res/S-PCSIR/Chem (292)	Economical Viability of Pesticidal Residues and PCBs Free Fishery Products.
8.	PSF/Res/C-QU/Chem (395)	Stereoselective total Synthesis of Some Antimalarial, Antituberculosis, Antifungal and Cytotoxic Dihydroisocoumarins Metabolites.
9.	PSF/Res/P-AU/Engg (54)	Controlled Drainage for Crop Production and Water Quality Enhancement.
10.	PSF/Res/F-UET/Engg (87)	Design, Development and Fabrications of Sugarcane Planter for Small and Medium Landholders of Pakistan.
11.	PSF/Res/F-GIK/Engg (102)	Design, Fabrication And Installation of Photovoltaic System with Load Controller for the Generation of 4-5 KW power.
12.	PSF/Res/ C-COMSATS/Med (220)	Epidemiological Investigation of <i>Pertussis</i> Infection in Pakistan by Studying the Distribution of Ptx, Prn and Fim Alleles.
13.	PSF/Res/US-NSF/C-QU/Phys (122)	The Study of Superconducting Properties of Cu-1X TixBa ₂ Ca ₂ Cu ₃ O ₁₀ -Y thin Films to be Used for Microelectronics Devices.
14.	PSF/Res/C-QU/Phys (129)	Investigation of Collective Excitation in Density Modulated Nanostructures in Magnetic Field.
15.	PSF/Res/C-PINSTECH/Phys (140)	Search for Light Magnetic Monopoles (SLIM) using Solid State Nuclear track Detectors.

16.	PSF/Res/ ILP/026/03	Establishment of Pilot Green Tea Processing Plant.
17.	PSF/Res/ ILP/027/04	Production of Iron and Steel from Kalabagh Iron Ore through Direct Reduction Process.
18.	PSF/Res/ ILP/034/05	Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders.

i) **BIOLOGICAL SCIENCES**

Project No.	PSF/Res/ S-PCSIR/Bio (221)
Project Title:	Preparation of Products of Economic Importance (Chitin & Chitosan) from Shellfish Waste.
Duration:	2-Years
Date of Initiation:	01.07.2007
Date of Completion:	30.06.2009
Total Expenditure:	Rs.446,464/-
Principal Investigator:	Dr. Khalid Jamil
Name of Institution:	PCSIR Labs Complex, Karachi

SUMMARY:

Shrimp processing industries generates huge quantities of waste consisting of heads, hulls, tails and exoskeleton. This waste may exceed about 60% of the landed weight of the particular shrimp species, Pakistan produces about 15000-35000 MT of shrimp annually, therefore a huge amount (10000-15000 MT) is generated. This waste is a source of valuable components. The most important is a substance known as "Chitin" Chitin is a polysaccharide and the most abundant polymer after cellulose. Chemically it is N-Acetyl-D, Glucosamine. It has wide applications in various industries like food, pharmaceutical, agriculture etc. The project is aimed to develop a simple methodology for the preparation of chitin from shrimp waste, so as to utilize the waste for useful products of economic importance and find some uses of the product. This will not only reduce pollution but also utilize marine resource for value added products. Raw material (shrimp heads) procured from shrimp processing plant was subjected to experimental studies for the isolation and preparation of chitin. A simple methodology is developed to isolate and prepare chitin. The extraction of chitin from shrimp heads is about 3-10% depending upon the species, Minimum particle size is 2-8 mm, color is off white, ash contents less than 2.3% with a moisture content of less than 12%. The methodology involved grinding, removal of proteins, removal of minerals, removal of color and final drying of the product. A number of experiments were conducted to optimize the conditions in terms of concentration of chemicals used. It was established that 10%

Hydrochloric acid and 3% Sodium Hydroxide gives the best yield and conversion rate of chitin. Conversion of chitin to chitosan was attempted. A 65% conversion of chitin was established using 50% alkali for 4 hours at 60 chitin. In one study experiments were conducted to see the effect of chitin on plant growth. A significant difference was noticed after the application of chitin. In another study chitosan was used to assess its efficacy as an antibacterial agent. Some activity was seen against *S. aureus* and *E. coli*. However, the activity was not very significant. The zone of inhibition was less than 20mm. The studies further continued for further research in the field.

Chitin was also assessed for its plant growth promoting effect. Various doses of chitin were applied to Okra plants. The results showed positive effect on the plant height, number of leaves, number of flowers and fruits.

Project No.	PSF/Res/S-SU/Bio (287)
Project Title:	Formulation of Low Cost Quality Fish Feed from Indigenous Raw Material and Its Effect on Growth and Survival of Major Carps.
Duration:	2-Years
Date of Initiation:	01.06.2007
Date of Completion:	31.05.2009
Total Expenditure:	Rs.500,820/-
Principal Investigator:	Prof. Dr. Naeem Tariq Narejo
Name of Institution:	University of Sindh, Jamshoro

SUMMARY:

Formulation of low-cost quality fish feed for the growth and survival of major carps was studied. An experiment was conducted in 10 glass aquaria (size 90 x 30 cm) for a period of six months starting from March to August 2008. Five fish of each species (*Labeo rohita*, *Catla catla* and *Cirrhinus mrigala*), in total 15 fish of same age group, with mean initial length and weight of 5.5 ± 1.40 cm and 6.4 ± 1.6 g respectively were assigned to each aquaria. Three iso-caloric feeds were formulated with locally available ingredients (rice protein, rice bran and wheat bran) of different protein levels such as 30%, 35% and 40% (dietary protein levels) of 2 mm dia were prepared with the help of manually operated pellet machine. The feed ingredients were tested for proximate (bio-chemical composition) analysis according to the methods given in AOAC (1980) and found 13%, 12% and 40% protein respectively. Each feed was supplied at a rate of 8% of the body weight of fish twice a day.

The results of the various growth parameters like suitability of protein level requirement, specific growth rate, mean total weight gain, percentage weight gain, feed conversion ratio, survival rate and production of the experimental fish showed significantly ($p < 0.05$) highest growth and production in feed B followed by feed C while significantly ($p < 0.05$) lowest growth and production was recorded from feed A. It is therefore concluded that the low-cost feed with 35% gross protein would be suitable for the better growth and production of major carps.

For the formulation of low-cost quality fish feed, it is concluded that the rice protein and rice milling were found to be cheaper and easily available feed ingredients than other conventional food items. 35% gross protein level found to be suitable for the rearing of major carps, especially rahu showed significantly highest values of growth, survival rate, length-weight relationship and relative condition factor among the experimental fish.

Project No.	PSF/Res/P-AU/Bio (355)
Project Title:	Pharmacological Evaluation of Two Anti-Hyperlipidaemic Indigenous Medicinal Plants in Albino Rabbits and Determination of Their Mechanisms of Actions.
Duration:	2-Years
Date of Initiation:	01.07.2007
Date of Completion:	30.11.2009 (Extended)
Total Expenditure:	Rs.1,025,100/-
Principal Investigator:	Prof. Dr. Ijaz Javed Hassan
Name of Institution:	University of Agriculture, Faisalabad

SUMMARY:

Pharmacological screening of eight indigenous medicinal plants i.e. *Withania somnifera* L. (Ashwagandha), *Lactuca scariola*, seed (Kahu), *Citrullus lanatus* Humb., seed (Water melon seed), *Piper longum* L. fruit (Long pepper), *Syzygium aromaticum* L. (Clove), *Sorghum bicolor* L. seed (sorghum), *Cinnamomum zeylanicum* Blume (Cinnamon) and *Cucumis sativus* L. (Cucumber) was carried out in hyperlipidaemic albino rabbits for their antihyperlipidaemic efficacy. Based on the results, two indigenous medicinal plants, *Cinnamomum zeylanicum* and *Lactuca scariola* were selected for their pharmacological evaluation regarding antihyperlipidaemic activity.

The highest dose of *C. zeylanicum* bark powder reduced the post cholesterol feeding day 90 value of total lipids, triglycerides, total cholesterol and LDL-cholesterol at 180 post treatment day inducing 49%, 52%, 63% and 59% reduction, respectively. The respective values in case of *L. scariola* seed powder were found to be 61%, 62%, 64% and 63%. However, the highest powder doses of *C. zeylanicum* and *L. scariola* changed the post HDL- cholesterol day 90 value at 180 post treatment day showing 48% and 52% increase, respectively. In case of methanol extracts of *C. zeylanicum* and *L. scariola* powder the day 90 post cholesterol feeding values of total lipids, triglycerides, total cholesterol and LDL-cholesterol were reduced at post treatment day 180 reflecting the percentage reduction as 57% and 63%, 59% and 45%, 69% and 60% and 62% and 55%, respectively. The respective values of HDL-cholesterol increased at post treatment day 180 showing the percentage increase as 53% and 48%. Further, the methanol extracts of *C. zeylanicum* bark powder and *L. scariola* seed powder and simvastatin at the dose of 0.6mg/kg are equieffective in treating the hyperlipidaemia in albino rabbits.

Project No.	PSF/Res/ P-UAF/Bio (408)
Project Title:	Preparation and Characterization of Legumes Protein Isolates to Improve Nutritional and Functional properties of Baked Products.
Duration:	2-Years
Date of Initiation:	01.07.2008
Date of Completion:	30.06.2010
Total Expenditure:	Rs.1,003,680/-
Principal Investigator	Dr.Masood Sadiq Butt
Name of Institution:	University of Agriculture, Faisalabad.

SUMMARY:

The study was planned to extract and characterize legumes protein isolates for supplementation purpose in value added baked products. Accordingly, four different legumes isolates i.e. cowpea, pigeon pea, pea and mungbean were evaluated for functional properties, biological assay and subsequently their ability to improve nutritional quality of baked products i.e. cookies and bread. Proximate assay of legumes explicated that cowpea has moisture, crude protein, crude fat, ash, crude fiber, and NFE content as 10.39±0.73, 27.88±1.95, 1.27±0.09, 3.84±0.27, 9.58±0.67 and 57.42±4.01% respectively. Likewise, values of 8.30±0.51, 25.90±1.60, 4.36±0.08, 4.36±0.27, 4.61±0.28 and 63.89±3.94% for

moisture, crude protein, crude fat, ash, crude fiber and NFE content were recorded in mungbean, respectively. In comparison, pigeon pea has moisture, crude protein, crude fat, ash, crude fiber and NFE content as 11.07 ± 0.50 , 22.01 ± 1.00 , 2.00 , 2.03 ± 0.09 , 3.96 ± 0.18 , 8.19 ± 0.37 and $63.80\pm 2.90\%$, respectively. Whereas, peas contain moisture, crude protein, crude fat, ash, crude fiber and NFE content as 9.05 ± 0.55 , 22.95 ± 1.39 , 1.41 ± 0.09 , 3.48 ± 0.21 , 6.83 ± 0.41 and $65.33\pm 3.96\%$, respectively.

On the basis of overall yield, functional properties and biologically assay, two best legumes protein isolates (cowpea and pea) were selected for supplementation purpose in cookies and bread. The respective composite flour samples were tested for their rheological behavior. It is obvious from the farinograms that cowpea protein isolates (CPI) supplemented flour has more water absorption than pea protein isolates (PPI) addition.

In toto, from the present exploration, it is concluded that supplementation of legumes protein isolates is an effective strategy to cope with the protein deficiency by introducing protein enriched baked products like cookies and bread. Current results illustrated that in cookies, supplementation of cowpea and pea protein isolates up to 10% is quite acceptable. Likewise, uniform bread can be prepared by 10% addition of selected legumes isolates nevertheless, 5% level is more appropriate.

ii) BIOTECHNOLOGY AND GENETIC ENGINEERING

Project No.	PSF/Res/S-NIA/Biotech (134)
Project Title:	Use of Induced Somatic Mutation and Biotechnology for the Genetic Improvement of Sugarcane (<i>Saccharum Sp.</i> Hybrid).
Duration:	3-Years
Date of Initiation:	01.07.2007
Date of Completion:	30.07.2010
Total Expenditure:	Rs.626,857
Principal Investigator:	Dr. Imtaiz Ahmad Khan
Name of Institution:	Nuclear Institute of Agriculture, Tandojam

SUMMARY:

Three sugarcane clones NIA-98, NIA-2004 and BL4 were selected for in vitro culture studies viz direct regeneration callus culture and in vitro mutagenesis for the creation of genetic variability. Four auxins i.e. 2,4 dichlorophenoxyacetic acid (2,4-D) indol acetic acid (IAA) 3,6-dichloro2methoxybenzoic acid (Dicamba) and picloram were used for callus induction.

Best 5 callus induction was observed in pichloram, high percentage of ten regenerable callus was introduced ob dicamba. The maximum plantlets regeneration was recorded in NIA-98 and minimum in NIA2004. The maximum chlorophyll mutation frequency was observed in NIA-2004 and Minimum in NISA-98.

For direct regeneration ten different media were used and regenerated shoot were subjected to elongation on 4 different media containing different concentrations of phytochrome. Vigorous root induction was observed when shoots were transferred to media containing 1mg/1IBA and 6% commercial sugar. For in vitro mutagenesis actively growing callus was treated with five different doses of gamma rays (10gy, 20Gy, 30Gy, 40Gy and 50gy). The maximum callus proliferation and plantlets regeneration were recorded in 20Gy and minimum in 50Gy. The maximum chlorophyll mutation frequency was recorded in 40 and 50Gy. Variability obtained through these methods was also confirmed through molecular marker techniques.

Project No.	PSF/Res/AJK-UAJK/Biotech (196)
Project Title:	Genetic Analysis and Field Evaluation of Potato (<i>Solnum tubersum</i>) Genotype in Azad Kashmir.
Duration:	3-Years
Date of Initiation:	01.05.2007
Date of Completion:	11.09.2011 (extended)
Total Expenditure:	Rs.500,820/-
Principal Investigator:	Prof. Dr. M. Fareed Khan
Name of Institution:	University of Azad Jammu & Kashmir, Rawalakot

SUMMARY:

In present study, the chromosomal behavior at metaphase I was analyzed to confirm the chromosomal variation among different cultivars. Most of the slides were having $2n= 48$ chromosomes. The results indicated no significant difference in chromosomal configurations. All the varieties were almost similar in chromosome number, size and shape. Majority of the chromosomes were found as ring bivalents and some time rod shaped with no trivalent or quadrivalents. All the varieties indicated the presence of univalent.

Screening of the genotypes was also done by using SDS-PAGE. The banding pattern drawn from the figure of gel indicated slight variations among the genotypes. Total 12 bands were visible at about same distance in the gel. SH-63 and SH-113 were different from the others as they expressed one band each at the distance of 1.0 cm in the protein profile. The variability

recorded from the gel further proved that the cultivars differ in their genetic makeup and could provide good breeding stock for varieties improvement. The results of the dendrogram technique shown the variation among the cultivars in two major groups. In one group Diamon and in other NARC 2002, NARC-2005 and SH 174. 2nd group showed in two minor groups i.e. NARC 2002 NARC-2005 in 1st group and SH-174 in 2nd group showing the variability among them. According to the Dice co-efficient, the similarities between cultivars were found as 53 % between Diamon and NARC -2002 and 84% between NARC 2002 and SH- 174 and 89% between NARC- 2005 and SH-174. The differences among the cultivars noted from the gel further proved that the cultivars are different in their genetic makeup.

The morphological results of first experiment revealed that variety SH-701 remained efficient over all others by showing more yield, more tubers size and more tuber weight while it gained intermediate plant height, no. of tubers/plant. Variety Sh-692 showed more germination percentage while SH-113 and SH-63 showed more plant height. Cardinal produced more number of tubers/plant with intermediate yield and Sialkot took more days to germination than others. An intermediate response of germination percentage was shown by variety Sialkot, SH-701 and SH-480. This type of response may be due to climatic conditions of District Rawalakot, Azad Kashmir. In second experiment, a total 14 genotypes were grown and only 8 germinated under Rawalakot conditions. Four cultivars were selected for further studies and Data analysis. In second experiment Diamon (8.33) showed best performance as compared to others. No. significant difference was observed NARC-2002-1, Cardinal, SH-480, Desiree producing 4.80, 4.60, 4.44 and 4.01 tubers/plant respectively. Cardinal produced maximum yield 2.78 tons/hectare followed by NARC-2002-1 with 2.70 tons/hectare. Diamon produced 2.44 tons/hectare. No significant difference was observed between NARC-2005/34 and Desiree producing low yield 1.99, 1.88 tons/ hectare. SH-480 (1.13) was very poor in yield in tons/ hectare. The results of the third year yield trial at District Rawalakot was successful with good performance of all the selected genotypes except SH-480, which showed a poor performance as compared to all other genotypes under observation. Diamon produced 11.67 cm average tuber size, 8.33 tubers/plant with yield 2.78 tons/hectare, however, yield trial at District Kotli was not successful.

iii) CHEMICAL SCIENCES

Project No:	PSF/Res/S-PCSIR/Chem (292)
Project Title:	Economical Viability of Pesticidal Residues and PCBs free Fishery Products.
Duration:	2-Years
Date of Initiation:	01.07.2006
Date of Completion:	30.06.2008
Total Expenditure:	Rs.311,990/-
Principal Investigator:	Dr. Alia Bano
Name of Institution:	PCSIR Labs. Complex, Karachi

SUMMARY:

The Karachi coast line is stretched over 135 km and is facing severe pollution due to discharge of waste from industrial, port, municipal and transportation activities in the area contaminating the marine environment badly. The port authorities are ill-equipped and inadequately trained to dump toxic waste in sea or on land. Among all, the shipping industry by transportation activities pollutes the environment greatly. The present study was conducted to develop a system for regular analytical facility to improve the quality of fishery for export, as exporters of Fishery products are under stress due to certain problems such as; marine pollution, non-availability of quality fishery on sustained basis with stable prices, methods of fishing, and preservation of fishery products.

A clear trend of the greater metabolic activity for the lower chlorinated congeners was difficult to recognize in fish samples because of the very low concentrations of PCBs. Lipid content was not measured during processing of MSPD, however bioaccumulation in fishes depends upon their fat content. In fact, for \sum PCBs and \sum OCPs, the mean level on wet weight basis of contamination in the examined tissues always found with a linear relationship with their mean lipid content. Generally, lipid content of fish tissue in net mass is about 15%, mainly being composed of phospholipids, triacylglycerolipids, cholesterol and sterol esters. The presence of congeners in higher proportions in industrial PCBs formulations seems to be responsible for persistence and bio-accumulative properties. Moreover, a little difference in the pattern of relative percentages of each congener to the total PCBs was found in different fishes and was observed that PCBs with higher chlorine content are usually more difficult to metabolize resulting in greater persistence and bioaccumulation.

Project No.	PSF/Res/C-QU/Chem (395)
Project Title:	Stereoselective total Synthesis of Some Antimalarial, Antituberculosis, Antifungal and Cytotoxic Dihydroisocoumarins Metabolites.
Duration:	2-Years
Date of Initiation:	25.06.2007
Date of Completion:	24.06.2009
Total Expenditure:	Rs.673,147/-
Principal Investigator:	Dr. Amir Saeed Bhatti
Name of Institution:	Quaid-i-Azam University, Islamabad.

SUMMARY:

A wide variety of biologically active isocoumarins and 3, 4- dihydroisocoumarins are isolated predominantly from various natural sources as secondary metabolites. A majority of isocoumarins and dihydroisocoumarins are isolated from various species of fungal genera such as: *Artemisia*, *Aspergillus*, *Ceratocystis*, *Fusarium*, *Penicillium* and *Streptomyces* etc. Some of them are constituents of a few higher plant families which include the *Bignoniaceae*, *Compositae*, *Leguminosae*, *Myricaceae*, *Saxifragaceae*, *Myristicaceae* and *Liliaceae*.

A number of known naturally occurring isocoumarins is increasing dramatically, mainly due to great improvement in the isolation and purification techniques and the availability of spectroscopic and crystallographic facilities for structural elucidation. The various aspects of isocoumarin chemistry like the isolation, structure elucidation, biological activities and biosynthesis has extensively been studied for the last few decades and a number of reviews has been published on these aspects. In order to synthesize the targeted molecules i.e. 7-Butyl-6,8-dimethoxy-3-pentylisocoumarins and their 3,4-dihydroisocoumarin derivatives, the present study was carried out the synthesis of 4-Butyl-3,5-dimethoxyhomophthalic acid (1) and 3,5-Dimethoxy-4-methylhomophthalic acid (2), starting from simple *p*-toluic acid through a multi-step synthetic methodology.

These homophthalic acids are the key precursors for the synthesis of isocoumarins and their 3, 4-dihydro-analogues, through a number of steps. In order to avoid certain problems, alternate routes were employed for their synthesis. In addition, all the synthesized compounds were confirmed and characterized during each step, on the basis of their physical data by using various spectral techniques like FT-IR, ¹H NMR, ¹³C NMR and elemental analysis.

iv) ENGINEERING SCIENCES

Project No.	PSF/Res/P-AU/Engg (54)
Project Title:	Controlled Drainage for Crop Production and Water Quality Enhancement.
Duration:	3-Years
Date of Initiation:	15.06.2002
Date of Completion:	14.06.2005
Total Expenditure:	Rs.431,500/-
Name of Principal Investigator:	Prof. Dr. Rai Naiz Ahmad
Name of Institution:	University of Agriculture, Faisalabad

SUMMARY:

The knowledge about the effects of varying high water table conditions on crop growth is of prime importance not only to determine the rate of removal of excess water for designing the drainage system but also in term of developing measures to make use of high water table in suppressing surface water supplies.

The sole purpose of the experiment was to determine the effect of varying high water table depths on wheat and rice growth parameters its impact on wheat irrigation requirements and salinity buildup in the soil profile because of use of marginal low quality for irrigation and maintaining high water table. The twelve lysimeters and three control fields were used for this purpose. In contrast to old studies on water table management where water tables were maintained at selected depths for whole of the cropping seasons, this experiment was conducted for varying high water table depths (15-cm, 30-cm, 40-cm, 50-cm) and durations (10 days each) impact on different growth stages (early vegetative, late vegetative, flowering and grain formation) of wheat. The selected treatments were based on the recommendations of previously conducted controlled drainage studies in the University of Agriculture, Faisalabad.

All of the lysimeters were surface irrigated at 50% depletion of available water before starting high water table treatments. During the treatments, the irrigation was applied on basis of soil moisture sampling and analysis. Data collection under this study for the crop, included grain and straw yields, canopy height, number of grains per spike, weight of grins per spike, 1000-grain weight and spike length. In addition soil salinity behavior and irrigation depths were measured for each of high water table treatment.

Project No.	PSF/Res/F-UET/Engg (87)
Project Title:	Design, Development and Fabrications of Sugarcane Planter for Small and Medium Landholders of Pakistan.
Duration:	3-Years
Date of Initiation:	06.06.2006
Date of Completion:	05.06.2009
Total Expenditure:	Rs.694,618/-
Principal Investigator:	Dr. Zahid Mahmood
Name of Institution:	KPK University of Engineering and Technology, Peshawar

SUMMARY:

In line with the objectives of the projects in order to develop efficient sugarcane planter through agricultural mechanization two models of the planter were manufactured. First model had problems of missing, heaping and capacity of the container. Based on first model of planter, a newer version was designed, modeled, manufactured and tested using latest technologies. Due consideration was given to issues like missing, heaping, planting rate, seed carrying capacity, maintenance, and cost of the machine. The planter is designed for mounting on a 50 hp tractor. It has an estimated planting rate by more than 75000 billets per day. It will increase planting rate by more than 35%. It maintains row distance at 0.90m; has billets dropping rate of 61sets per 25m, and billets carrying capacity of 0.60 meter cube. The machine is estimated to cost approximately Rs.45000/- and designed to reduce planting cost by 40-50% Test results of the machine performance were analyzed and machine was found efficient. It is suggested to patent the planter and industrialize it. As project is of huge importance and efficiently designed, so it won many honors and prizes.

Project No.	PSF/Res/F-GIK/Engg (102)
Project Title:	Design, fabrication and installation of photovoltaic system with load controller for the generation of 4-5 KW power.
Duration:	1-Year
Date of Initiation:	01.08.2008
Date of Completion:	31.07.2009
Total Expenditure:	Rs.332,250/-
Principal Investigator:	Dr. Muhammad Abid
Name of Institution:	GIK Institute of Engineering Sciences &Technology, Topi

SUMMARY:

This report describes the design and investigation of a photo-voltaic system with variable solar modules inclination angles and fabrication, maintenance, installation and wiring of all solar modules with inverters and circuit diagrams and connections with the medicinal centre at GIKI for the use of electric power achieved. The current-voltage (I-V) characteristics of a single crystal module are investigated in the natural conditions. The PV system contains 180 modules of area of 0.37-0.39m². The inclination angle of each module with the horizontal plane was 23°, 34° and 45°. The latitude of the PV station's location is 34°. Investigations were performed in clear and variable cloud days. An increase of 12-19% in the produced electrical energy is observed with an increase in the inclination angle in the winter period i.e. February 2009. The efficiency of the modules was in the range of 11%-12% at the change of inclination angles. A simple PV modules support in order to easily change the modules inclination angle was designed. Total number of the supports was equal to 34 and on each support; 5-6 modules were installed. Approximately one and half hour was calculated to change the inclination angle of all the modules seasonally.

v) MEDICAL SCIENCES

Project No.	PSF/Res/C-COMSATS/Med (220)
Project Title:	Epidemiological Investigation of <i>Pertussis</i> Infection in Pakistan by Studying the Distribution of Ptx, Prn and Fim Alleles.
Duration:	2-Years
Date of Initiation:	01.08.2007
Date of Completion:	30.07.2009
Total Expenditure:	Rs.1,032,240/-
Principal Investigator:	Dr. S. Habib Bokhari
Name of Institution:	COMSATS Institute of Information Technology, Islamabad

SUMMARY:

The pertussis whole-cell vaccine is being used in Pakistan for past many decades but there is no molecular surveillance system operative to monitor the relationship between the genotypic and antigenic profiles of circulating strains and vaccine strains as recent data indicates that there are disease cases even among those who have been immunized. The present study was conducted to establish a surveillance system on the basis of molecular markers to be aware of

the disease spectrum in Pakistan and compare it with the rest of the world. A total of 59 culture positive *B. paraptussis* as well as PCR positive for IS1001 and IS1002 were obtained and *B. pertussis* strains Tohama and *B. paraptussis* (B0024; *Bordetella paraptussis* isolates from the Netherlands) were used as positive control. There was evidence of existence of typical *B. pertussis* due to the amplification products seen when 5 (0.6%) direct PCR positive cases (2 from KPK and 3 from Sindh) were detected using IS481 and the S2 subunit of pertussis toxin (*ptx2*) gene specific primers but none of them was culture positive.

In study, it was observed that sera showing IgG concentration > 24U/MI were considered positive and assumed to have recent exposure to *B. pertussis*. A total 219 people were studied, of which, 119 were males and 100 females, of those, 180 (82.2%) persons found seropositive for *B. pertussis* infection and no significant correlation between age groups and seropositivity except age group 26-35, in which females got more antibody titre as compared to males was found. However, correlation was found between the geographic region and the seropositivity. The participants from a KPK province possessed higher level of seropositivity (91%) for *B.pertussis* antibody as compared to others, which is the first report on seroepidemiology to *B.pertussis* in Pakistani population and adults were the source of *B. pertussis* infection for children. Pertussis may have been shifted to atypical form in children to which physicians were unaware. The DTP vaccination was found to reduce the burden of *B. pertussis* in twin cities of Rawalpindi and Islamabad, which was understood by the evidence that higher rate of seropositivity in the province of KPK, where vaccination is not practiced in many areas due to cultural reasons.

vi) **PHYSICS**

Project No.	PSF/Res/US-NSF/C-QU/Phys (122)
Project Title:	The Study of Superconducting Properties of $Cu_{1-x}TixBa_2Ca_2Cu_3O_{10-y}$ thin Films to be Used for Microelectronics Devices.
Duration:	3-Years
Date of Initiation:	01.09.2003
Date of Completion:	31.08.2006
Total Expenditure:	Rs.625,447/-
Principal Investigator:	Dr. Nawazish Ali Shah
Name of Institution:	Quaid-i-Azam University, Islamabad

SUMMARY:

The fluctuation induced conductivity of $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_{n-1}\text{Cu}_n\text{O}_{2n+4-y}$ ($n=2, 3, 4$) [CuTl-12($n-1$) n] superconductor thin films has been studied and tried to find out any correlation between the critical temperature and the parameters extracted from the excess conductivity data i.e. cross-over temperature, pseudogap temperature and fluctuation amplitudes.

The influence of the nature of the grain boundaries on the inter-granular critical current density (J_{BBcBB}) has also been investigated in $\text{Cu}_{1-x}\text{Tl}_x\text{Ba}_2\text{Ca}_3\text{Cu}_4\text{O}_{12-y}$ superconductor thin films samples. Moreover excess conductivity analysis of $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_1\text{Cu}_2\text{O}_{8-y}$ thin films was carried out.

The understanding of microscopic properties is essential for the use of these films in the device application. We have carried out Fluctuation Induced Conductivity Analysis of $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_{n-1}\text{Cu}_n\text{O}_{2n+4-y}$ ($n=2, 3, 4$) superconductor thin films for such studies. These studies are essential, because such microscopic properties (higher coherence length and inter-plane coupling) provide us with very higher J_c required in various applications.

Project No.	PSF/Res/C-QU/Phys (129)
Project Title:	Investigation of Collective Excitation in Density Modulated Nanostructures in Magnetic Field.
Duration:	3-Years
Date of Initiation:	01.07.2006
Date of Completion:	30.06.2009
Total Expenditure:	Rs.337,763/-
Principal Investigator:	Dr. Kashif Sabeeh
Name of Institution:	Quaid-i-Azam University, Islamabad.

SUMMARY:

Investigations have been in the course of this project, effects of density modulation on the transport properties of grapheme as well as two-dimensional electron gas (2DEG) systems realized in semiconductor heterostructures. Considerable body of work, both theoretical as well as experimental, is available regarding modulation induced effects on a 2DEG (1-5). Researchers were able to relate and compare the results obtained in grapheme with those of a 2DEG. It was found that commensurability oscillations that appear in the single particle as well as collective properties are enhanced and more robust with respect to temperature compared with a 2DEG, quantitative comparisons were performed.

Collective excitations (plasmons) in density-modulated nanostructures such as quantum wires and quantum dots in the presence of a magnetic field. Motion of electrons in nanostructures in the presence of a periodic potential and a perpendicular magnetic field leads to interesting physics as three relevant length scales are involved (the period of the potential, magnetic length and the confinement length). Investigation of this project, effects of density modulation on the transport properties of graphene as well as two-dimensional electron gas (2DEG) systems realized in semiconductor heterostructures. Considerable body of work, both theoretical as well as experimental, is available regarding modulation induced effects on a 2DEG (1-5). Researchers were able to relate and compare the results obtained in graphene with those of a 2DEG. It was found that commensurability oscillations that appear in the single particle as well as collective properties are enhanced and more robust with respect to temperature compared with a 2DEG, quantitative comparisons were performed.

Project No.	PSF/Res/C-PINSTECH/Phys (140)
Project Title:	Search for Light Magnetic Monopoles (SLIM) using Solid State Nuclear track Detectors.
Duration:	3-Years
Date of Initiation:	01.02.2008
Date of Completion:	31.01.2011
Total Expenditure:	Rs.749,148/-
Principal Investigator:	Dr. M. Ikram Shahzad
Name of Institution:	PINSTECH, Islamabad

SUMMARY:

Magnetic Monopoles are magnetically charged particles and have been predicted by various physical theories but, experimental searches have failed so far to demonstrate the existence of Magnetic Monopoles. For the detection of magnetic monopoles expensive on-line detection systems such as in MACRO experiment at Gran Sasso, Italy have been used. Some research groups are using off-line detection system such as solid state nuclear track detectors for space-track and restricted energy loss analysis. "Search for light magnetic monopoles" is an international project which is being carried out under the auspices of Physics Department, Bologna University, Italy. The Physics Division, PINSTECH is collaborating from Pakistan side. For this project the University of Bologna donated detector modules comprise of CR-39 and Lexan plastic nuclear track detectors. These detector modules were installed in about 100

m² area during May 2002 for the exposure to cosmic radiation near top of the Khunjerab Pass in Himalayan region of Pakistan. This exposure was completed in April, 2006.

A laboratory in Physics Division, PINSTECH has been established for prolonged etching and analysis of these exposed detectors. These detectors exposed to cosmic rays have been etched and scanned for signatures of Magnetic Monopoles. The upper limit of flux of down-going intermediate mass magnetic monopoles and dyons came out to be for $\beta > 3 \cdot 10^{-2}$ is $1.54 \times 10^{-14} \text{ cm}^{-2} \text{ S}^{-1} \text{ Sr}^{-1}$. The radon level has been measured in the environment of experimental site, its suburbs and in the residential areas along Karakorum Highway. The study of radon measurement after the Earthquake 2005 in the areas of Azad Jammu and Kashmir (AJK), Pakistan has also been carried out. For this purpose Teachers interested to do research and student of AJK University, Muzaffarabad have been involved in this research work. The results of these studies have been reported in the form of publications in the national and international scientific journals.

vii) **R&D-INDUSTRY PROGRAMME**

Project No.	PSF/Res/ILP/026/03
Project Title:	Establishment of Pilot Green Tea Processing Plant.
Duration:	2-Years
Date of Initiation:	01.11.2005
Date of Completion:	31.10.2007
Total Expenditure:	Rs.2,416,465/-
Principal Investigator:	Mr. Bakht Mand Khan
Name of Institution:	National Tea Research Institute, Shinkiari

SUMMARY:

Tea plant belongs to the genus *Camellia* with in which about 90 species are included. These species are distributed primarily on the mainland of south-cost Asia. Tea, *Camellia sinensis* (L.) O. Kuntze is consumed as a beverage throughout the world.

All types of tea (green, black or oolong) are derived from the same plant. The difference is in how the plucked leaves are processed. Fresh tea leaves contain many chemical compounds which determine the quality of the manufactured tea. The leaves of the tea bushes are used both as a social and medicinal beverage. Green tea, unlike black tea is not fermented, so the active constituents remain unaltered in the herb. At present, there is tea garden on 33 acres of

land at National Tea Research Institute (NTRI) and 600 acres on the farmers' field out of which 50-60 acres are in production stage. The area under tea production is increasing with the passage of time. A black tea processing plant was procured by Pakistan Agricultural Research Council (PARC) and installed at National Tea Research Institute (NTRI), Shinkhari (Mansehra) during 2001. The plant has the capacity of one ton processed tea per day. In order to demonstrate the processing of green tea, a pilot green tea processing plant with the production capacity of 85-100 kg/day was procured from China and installed at NTRI with the financial assistance of Pakistan Science Foundation (PSF), Islamabad.

Project No:	PSF/Res/ ILP/027/04
Project Title:	Production of Iron and Steel from Kalabagh Iron Ore through Direct Reduction Process.
Duration:	1-Year
Date of Initiation:	10.02.2006
Date of Completion:	10.12.2007
Total Expenditure:	Rs.1,588,549/-
Principal Investigator:	Muhammad Shafique Anwar
Name of Institution:	Pakistan Council of Scientific & Industrial Research, Lahore

SUMMARY:

Kalabagh Iron Ore deposits are known to be the biggest iron ore deposits in Pakistan. These deposits are estimated to be more than 450 million tons. Different institutions conducted a number of studies within the country and abroad for beneficiation and utilization of these deposits. The deposits have not yet been exploited on commercial scale due to (i) complex nature of the ore, (ii) associated gangue minerals present and (iii) economical aspects involved in beneficiation of this ore prior to smelting.

As iron content in Kalabagh iron ore is low that is 33-35% Fe and silica content is high around 24-28%, it can not be used in conventional blast furnace technology to make iron and steel. Besides this, mineralogical composition of Kalabagh iron ore is also not favorable for conventional route. In spite of these facts, the present project was envisaged on this iron ore and other indigenous raw materials to develop a process on pilot plant level to make iron and steel by omitting beneficiation step and avoiding conventional blast furnace route. This is a new type of work in Pakistan and has not been carried out before.

Iron ore and limestone were acquired from Makerwal area of the Kalabagh. The coke breeze was purchased from local market, Bench scale experiment was conducted in gas fired pit furnace using graphite crucibles No.25-No.35 for different batches of charge. The pilot plant tests were completed in a rotary kiln after making required modifications according to the process. The kiln was fired with coal burner. Gas burner was also used during experimentation. Process parameters like batch composition, residence time, temperature in different zones of the kiln, feeding and discharging time and cooling mechanism for pouring/discharging the material produced, were studied and optimized to achieve the maximum grade and recovery, both at bench scale as well as pilot plant level.

The lab studies led to the conclusion that it is possible to produce iron metal from the Kalabagh low grade iron ore. The purity of the metal obtained is 97-98% Fe with Carbon as maximum as 1.5% while at pilot plant level, studies have been resulted iron luppens or roasted material. The Luppens were segregated from the slag. The roasted material was ground and subjected to magnetic separation to get beneficiated iron concentrate. The grade and recovery of the final iron concentrate produced was 60% and 70% respectively.

The annual production capacity of Pakistan Steels. Karachi is only 1.1 million tons and it operates on imported ore while the demand of our country for iron and steel and its products is over five million tons per year. In these circumstances, the implementation of successful research findings of this study on commercial scale will be a major break through in the economy of Pakistan and it will also lead to the self reliance in the field of iron and steel.

Project No:	PSF/Res/ ILP/034/05
Project Title:	Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders.
Duration:	4-Years
Date of Initiation:	01.07.2005
Date of Completion:	30.06.2009 (extension)
Total Expenditure:	Rs.1,800,000/-
Principal Investigator:	Dr. Syed Muhammad Kashif
Name of Institution:	Space and Upper Atmosphere Research Commission (SUPARCO), Islamabad

SUMMARY:

Present report discusses the overview of all design/ development stage of the project, design& manufacturing of light weight composite reinforced CNG cylinder. This fourth and final

technical report, documents the complete design/development progress from start to completion of the project. In first stage, a fiber glass wound CNG cylinder using non – metallic polyurethane liner was manufactured and hydrostatically tested later on a Kevlar fiber wound CNG cylinder using seamless Aluminum liner was manufactured and tested .Finally in order to further reduce weight and increase vehicle performance due to better fuel efficiency CNG cylinder with plastic is developed and tested. This newly developed plastic liner can now be used instead of previously used liner for winding. Finally, Kevlar fiber wound CNG cylinder using plastic liner has been developed and successfully qualified against pressure of 250 bars.

The present work has enabled to indigenously develop a composite CNG cylinder. In this regard, all the required technology /skill for product development and manufacturing have been well acquired and mastered. The developed CNG cylinder has been qualified and thus the project is completed with no research work remaining. However, certification of the developed product from an accredited source can be done if extra funds are available

1.1.2 Scientific Publications Produced through PSF Supported Projects

One of the main achievements and usefulness of any research is the publication of its results in scientific journals. Based upon the results of completed projects, 42 research papers were published in different national / international journals. As far as NSLP-PSF funded projects are concerned, based upon the results of completed projects, 7 research papers were published in journals of good repute. Details are given in (**Annexure-IV**).

1.1.3 Higher Degrees Earned through PSF Supported Projects

One of the major goals of the Foundation is the development of scientific human resource in the country. This results in strengthening of R&D infrastructure of various scientific organizations. The Foundation has been developing scientific manpower through its research projects and the Research Associates employed in the PSF supported research projects to register for higher degrees. Following students working in PSF supported research projects were awarded Ph.D/M.Phil/M.S degrees:

S. No.	Project No.	Name of the Researcher	Degree awarded
1.	PSF/Res/P-AU/Bio (355)	Mr. M. Imran Faisal	M. Phil
2.	PSF/Res/C-QU/Chem (395)	Ms. Hummera Rafique	Ph.D.
		Mr. M. Zaman Ashraf	Ph.D.
3.	PSF/Res/S-NIA/Chem (292)	Ms. Hina A. Siddiqi	Ph.D.
4.	PSF/Res/S-NIA/Biotech (134)	Mr. Imtiaz Ahmed Khan	Ph.D.
		Mr. Abdullah Khatri	M. Phil
		Ms. Shafqat Yasmin	M. Phil
		Ms. Nighat Seema	M. Phil
		Mr. Nazir Ahmed Dahar	M. Phil
5.	PSF/Res/C-COMSATS/ Med (220)	Mr. Fahad Sayed	M.S
		Mr. Muhammad Ali Syed	Ph.D.
6.	PSF/Res/ILP/026/03	Mr. Frrukh Siyar Hamid	Ph.D.
7.	PSF/Res/C-QU/Phys (129)	Mr. Mehtab Ahmed Khan	M.Phil
8.	PSF/Res/US-NSF/C-QU/Phys (122)	Mr. Aqeel Ahsan Khurram	M. Phil

1.1.4 Participation in International Conferences

In order to present research papers in international science conferences, an amount of Rs. 1.531 million was released to 10 scientists and technologist under Non- Development Budget of PSF.

1.1.5 R&D-Industry Programme

Focusing on collaborative research and strong industrial linkages, R&D-Industry Programme (previously called Industrial Linkages Programme) is bringing together researchers, end-users and the funding institutions at one platform to create an environment of a unified approach to identify and solve industrial problems through applied research and technology transfer mechanism.

During the year, a project of applied nature entitled, "Investigation and Optimization of Combustion and Emissions Characteristics of Fatty Acid Methyl Esters of Different Origin" was initiated on June 01, 2011. For this purpose, an amount of Rs.2,138,500/- has been

released to GIK Institute of Engineering Sciences & Technology, Topi, District Swabi on account of 1st Installment of the Project funds. This project will ensure to diversify energy resources of the country especially in transport sector through production and practical implication of biodiesel. The wild plants which provide high oil yield will be enlisted and manually grown, because our reliance on edible vegetable oil sources for the sake of biodiesel production is not amicable in Pakistan due to our huge import bill of edible oil.

During reporting period four new projects have been registered under R&D Industry programme of PSF. Detail is given as below:

- Development of small scale flat plate solar collector and drier for agricultural purposes.
- To speedup the R&D work & production of humic acid fertilizer from lab. scale to semi-pilot plant/commercial scale.
- Processing of foods & vegetables and its utilization in the development of value-added products.
- Capacity enhancement & de-bottle necking of natural gas pipeline by computer aided design.

1.2 Pak-US Natural Sciences Linkage Programme (NSLP) Endowment Fund

NSLP Endowment Fund is an important component of PSF which is being managed by Pakistan Science Foundation (PSF) through Board of Governors (BoG). The Chairman, PSF is the Chief Executive of the Programme/Fund. The main objective of this fund is to enhance the agricultural production through effective and collaborative research which is carried out between the scientists of US and Pakistan. The out come of this research will benefit the end user while uplifting the income of the farmer.

Projects are invited from various Universities and R&D organizations of the country highlighting main problems faced by the Pakistani agriculture. Research work is mostly emphasized on the food security issues in Pakistani scenario. Currently 29 projects are being funded in different Universities and R&D organizations around the country under this programme.

Projects are received from researchers around the year; they undergo tough scrutiny and presented to the Technical Committee, comprising of eminent scientists from different specialized areas of agriculture and related fields. The target areas of these projects include germplasm screening of different crops, insect and pest management for the disease free crop production and post harvest

technology. All these research issues are vital component of today's agriculture and bringing the value added products in the market which is also the current trend of modern agriculture. Apart from this, many projects from specialized fields of animal sciences are also being funded. These include genetic screening of different animal breeds and feed technology. In future, this fund aims to fund more research projects related to applied fields of agriculture; especially issues related to the climate change and its effect on Pakistani Agriculture.

As the main aim of the fund is to benefit the farmers hence, to achieve the purpose "Farmers Conventions" are also organized. The first of its kind was held in Oct 2010 wherein, Principal Investigators of ongoing projects funded under NSLP, presented their progress. NSLP fund also plans to organize a series of workshops in different Universities across the country. These workshops will guide the researchers in the formulation of quality research projects for funding.

1.2.1 Activities and Programmes

1.2.1.1 Research Funding

Research funding is the principal activity of Natural Sciences Linkage Programme. The criteria of project funding include the competence of the scientific personal to carry out the research, institutional capabilities i.e availability of the basic equipment and laboratory facilities, scientific merit of the proposed research proposals and likelihood of completion of proposed research work within the stipulated time. The proposals are reviewed by two Pakistani experts along with US experts. The proposals cleared by experts are placed in the Technical Committee for technical evaluation and recommendation. Technical Committee on NSLP comprises of the renowned scientists from all the fields of the Agriculture. The proposals recommended by the Technical Committee are then submitted to NSLP Fund Management Committee for administrative and budgetary approval, before the release of funds.

a) Under-Process Projects

During the report period, 77 proposals remained under consideration of the NSLP. Out of these 34 projects were presented in three different Technical Committee meetings held during the report period. Technical Committee recommended 11 new projects at total cost of Rs 29.4 million. List of projects approved during the report period is given in (**Annexure-V**).

b) On-Going Projects

During the year, there were 29 ongoing research projects and the progress reports of 26 projects (semi annual, 1st and 2nd annual & final reports) were received. The NSLP staff scrutinized the semi annual reports, whereas, annual and final reports after initial scrutiny were sent for evaluation to the subject experts to assess the interim progress of the projects. Due installments of on-going projects are released only if the interim progress of the projects at the end of each year is satisfactory. An amount of Rs. 25.9 million was released on account of due installments and evaluation fee of ongoing projects. A list of semi annual and annual reports is given in (Annexure-VI).

c) Completed Projects

During the year one project was completed. The subject expert evaluated the final technical report of the project which was subsequently placed before the technical committee for consideration. The accounts of this project have been settled. Details of the project along with the scientific out put are given below.

Project No.	PSF/NSLP/P-NIAB (14)
Project Title:	Insecticide Resistance Management of Lepidopteran Pests of Cotton.
Duration:	2-Years
Date of initiation:	01.07.2008
Date of completion:	31.12.2010
Principal Investigator:	Dr. Mushtaq Ahmad
Name of Institution:	Nuclear Institute for Agriculture and Biology, Faisalabad.

SUMMARY:

Cotton is one of the major cash crop of Pakistan and is highly susceptible to the insect and pest attack. Major Cotton pests include army worm *Spodoptera litura*, and spotted boll worm *Earias vittlea*. With the evaluation of new insecticides to combat the pest attack the resistance in the pests for these chemicals is also developed accordingly. The main objective of the study were to access the current status of insecticide resistance against *S. litura*, *S. exigua*, *H. armigera* and *E. Vitella* and providing solutions for resistance management of these cotton pests. Insecticide resistance was monitored in the field population of army worm *Spodoptera litura*, beet army worm *S. exigua*, cotton bollworm *H. armigera* and spotted boll worm *earias vittlea*. The army worm developed a low resistance to the new chemistries such as insect

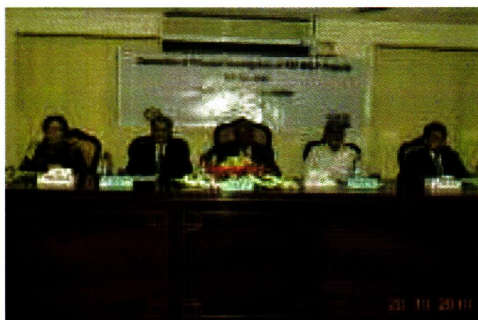
growth regulators lufenuron, chlotfluazron and methoxyfenozide spinosyns spinosad and spinetoram, amamectin and indoxcarb. The enzyme inhibitors piperronyl butoxide and tribufos produced a very good synergism with chlorfenapyr and emamectin benzoate, implying that cytochrome P450 monoxygenases and esterases may be highly responsible for resistance to these insecticides in *S. litura*. The LC₅₀s of organo phosphates profenfos, phoxim, monocrotophos and triazophos, carbamates methomly and thiodicarb and pyrethroids lambdacyhalothrin. Overall it is concluded that insecticides having moderate to low resistance should not be used for the control of particular pests. The insecticides showing no, or very low or low resistance should be recommended in rotation to manage populations of lepidoptern pests of cotton under field conditions.

1.2.1.2 Scientific Publications Produced through PSF Funded Projects

One of the main achievements and usefulness of any research is the publication of its results in scientific journals. Based upon the results of completed projects 07 research papers were published in various national/international journals.

1.2.2 Convention of Principal Investigators

Convention of Principal Investigators of ongoing NSLP funded projects was held on 20th October, 2011 in PSF auditorium. Main objective of the Convention was to bring the different stockholders of NSLP under one roof to evaluate the progress of NSLP on-going projects and to discuss the farmer's issues which can be solved by research to achieve the prosperity. The PI's of NSLP on-going projects presented the progress of their projects before the subject experts and guests in the convention, subject experts evaluated the progress of the ongoing projects.



The said convention was attended by the vast majority of the scientific community related to the agricultural research in the country. Dr. Amir Muhammad, Rector, National University of Computer and Emerging Sciences, was invited as chief guest of the occasion, Mr. Reysantella, Agriculture Attache, US Embassy Pakistan was also invited as the guest speaker.

Convention was divided into inaugural and technical sessions respectively. Prof. Dr. Kazi Suleman Memon, Coordinator Projects & Programs, Sindh Agriculture University, Tandojam, was invited for his vast contributions to agricultural research. All the speakers urged for the need of quality research in the country and lauded the efforts of PSF in this regard.



1.2.3 Workshop on Developing Training Module on Project Writing, Monitoring and Evaluation

A workshop titled as “Developing training module for project preparation, monitoring and evaluation” was held on 21st October 2010 in the committee room of PSF. Experts from Universities and Research Organizations attended the workshop. Main objective of the workshop was to develop the training module for the workshops and seminars. Foundation aims to conduct these workshops/seminars at different universities and R&D organizations across the country. These workshops will help researchers in the formulation of quality research projects. Overall, these workshops/seminars will have the colossal impact on elevating research standards. Apart from this, NSLP Proforma for the submission of research projects was also revised in the workshop.

1.3 SCIENCE PROMOTION

1.3.1 Institutional Support Programme

One of the functions of the Foundation is to support the Universities/R&D Organizations to strengthen their laboratories. During the report period, an amount of Rs.6.43 million was released to eight R&D Organizations for enhancement of their research capabilities by purchasing equipment, chemicals etc.

Name of Institution	Title of Activity/Request	Amount Released (Rs.)
Fatima Jinah Women University Rawalpindi.	Purchase of Equipment i.e., GPS	330,000/-
Pir Mehr Ali Shah Arid Agriculture University Rawalpindi.	Purchase of Equipment i.e., Laminar Flow Hood and CO ₂ Incubator	800,000/-
University of Azad Jammu and Kashmir, Muzaffarabad.	Purchase of Equipment i.e., Thermocycler "96-well" (PCR)	880,000
National Nematological Research Centre, University of Karachi, Karachi	Purchase of Equipment i.e., -80 °C Deep Freezer	525,000/-
University of Sindh, Jamshoro	Purchase of Equipment i.e., Zoom Scope Microscope (Digital video zoom 3-D images, trinocular head), Microscopic Illuminator	962,625/-
Quaid-i-Azam University Islamabad	Purchase of the Chemicals	900,000/-
Shah Abdul Latif University, Khairpur	Purchase of Equipment i.e., Sanyo Multimedia Projector Screen 6x6 Glass Bided Motorized with Wireless control ELMO Document Camera Portable Overhead Projector Pan Abroad Double sided with Built-in Plain Paper Copier and Stand	761,000/-
Quaid-i-Azam University, Islamabad	Purchase of Equipment Variable speed micro-centrifuge i.e., Centurion Scientific 1020 DE Gel Electrophoresis (2) Compound Microscope CXL (2) Micro centrifuge Sigma I-14 CO ₂ incubator MCO-15AC Sanyo Digital water bath K-K23D	878,000/-
Pakistan Museum of Natural History, (PMNH) Islamabad	Purchase of Chemicals for Preservation of Specimens, repairing Stuffed Animals and Articulation of Whale Skeleton received from Natural History Museum, Karachi.	150,000/-
Pakistan Museum of Natural History (PMNH) Islamabad	Material for the Preservation, Curation and Storage of the Scientific Material Transferred from Natural History Museum, Karachi	250,000/-
Total:		6,436,625/-

1.3.2 Financial Assistance for holding Science Conferences, Seminars, Symposia and Workshops

Another function of the Foundation is to provide funding for holding conferences/seminars /symposia/ workshops etc. During the year 2010-11, an amount of Rs.1.72 million was released to various institutions for organizing 22 conferences seminars, and workshops on important scientific topics listed below.

Sr. No	Title of Conference	Name of Organizers	Amount Released (Rs.)
1.	2 nd International Conference SAICON 2010 on "Nurturing Innovation, Entrepreneurship, Investment & Public Private Partnership in Global Environment" on 21-23 at Bhurban, Murree.	Prof. Dr. Qaiser Abbas Head, Department of Management Sciences , COMSATS Institute of Information Technology, Islamabad	300,000/-
2.	International Conference on "Energy Systems Engineering": ICESE-2010 on October 25-27, 2010 at College of E&ME, NUST, Islamabad.	Dr. Shamshad Ahmad Khan Director General (IC & HRD)College of E& ME, NUST, Islamabad.	50,000/-
3.	Symposia on "Building Effective Coordination between R&D and Industry for Enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies" from October, 2010-January, 2011, Islamabad.	Ms. Nageen Ainuddin Director, PASTIC, Islamabad.	100,000/-
4.	International Conference on "Earthquake Engineering & Seismology (ICEES-2011)" on 25-26 April, 2011 at National University of Science & Technology, Islamabad.	Engr. Dr. Abdul Qadir Bhatti Assistant Professor School of Civil and Environmental Engineering (SCEE), NUST, Islamabad.	100,000/-
5.	"Digital Innovation International Conference and Exhibition" on 21-22 December, 2010 at Institute of Space Technology, Islamabad	Dr. Qamar ul Islam Head , Communication Systems Engineering Department, Institute of Space Technology, Islamabad	50,000/-

6.	3 rd National Symposium on "Recent Trends in Endocrinology and Reproductive Sciences" on May 15-16, 2010 at the University of Lahore, Lahore.	Dr. M. Arslan Dean , Faculty of Sciences, University of Lahore Lahore	50,000/-
7.	12 th National Symposium on "Frontiers in Physics" on 2-4 February, 2011 at G.C University, Lahore in Collaboration with National Centre for Physics,	Prof. Dr. G. Murtaza Department of Physics G.C University Lahore.	50,000/-
8.	The Pakistan Institute of Physics Conference-2011" in Collaboration with Physics Department, University of Engineering & Technology, Lahore on 28-30 March, 2011 at UET, Lahore	Prof. Dr. M. Khaleeq ur Rehman, Secretary/Chairman Department of Physics UET, Lahore.	80,000/-
9.	One day Workshop on "Recent Trends in Entomological Education" on April 04, 2011 at University of Agriculture, Faisalabad.	Dr. Waseem Akram Associate Professor Department of Agro- Entomology, University of Agriculture, Faisalabad.	40,000/-
10.	National Conference on" the Strategies to Improve Meat Production in Pakistan" held on October 13, 2010 at Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan.	Dr. Zafar Iqbal Chaudhry Dean, Faculty of Veterinary Sciences, Bahauddin Zakariya University, Multan	50,000/-
11.	"National Biotechnology Exhibition and Seminar" on October 20-21, 2010 at University of Veterinary and Animal Sciences, Lahore.	Prof. Dr. Masroor Elahi Babar, Director, Institute of Biochemistry and Biotechnology, University of Veterinary and Animal Sciences, Lahore.	50,000/-
12.	1 st National "Phycological Conference-2011" on March 30-31, 2011 at G.C University, Lahore	Dr. Ghazala Yasmeen But Associate Professor Department of Botany Government College University Lahore.	50,000/-

13.	2 days Workshop on "VisioSpark 2010-A Series of Events" held on 11-12 October, 2010 at COMSATS Institute of Information Technology, Wah Cantt.	Mr. Muhammad Sharif Head, Department of Computer Sciences , COMSATS Institute of Information Technology, Wah Cantt.	50,000/-
14.	12 th International Symposium on "Natural Product Chemistry" on November 22-25, 2010 at HEJ, University of Karachi, Karachi.	Prof. Dr. Muhammad Iqbal Choudhary, Director, International Centre for Chemical and Biological Sciences, Karachi	100,000/-
15.	International Conference on "Biodiversity is Our Life" held on December 29-31 at Shah Abdul Latif University, Khairpur, Sindh.	Dr. G. Raza Bhatti Executive Secretary, Director CBC, Shah Abdul Latif University, Khairpur.	100,000/-
16.	International Conference on "Current Technologies in Oils and Fats" held on March 21-23 at Indus Hotel, Hyderabad, Sindh	Prof. Dr. Muhammad Iqbal Bhangar, Director, NCE in Analytical Chemistry, University of Sindh, Jamshoro.	80,000/-
17.	International Conference on "Computer & Emerging Technologies (ICCET-2011)" on 22-23 April, 2011 at Shah Abdul Latif University, Khairpur	Dr. Noor Ahmed Shaikh Chairman, Department of Computer Sciences, Shah Abdul Latif University, Khairpur	75,000/-
18.	International Conference of Chemistry on "Chemistry: Panacea of all problems" on January 03-05, 2011 at Jinnah University for Women, Karachi	Prof. Dr. Rafia Saeed Department of Chemistry Jinnah University for Women Karachi	50,000/-
19.	"9 th International and 21 st National Chemistry Conference-2011" on March 14-16, 2011 at University of Karachi, Karachi	Prof. Dr. S.S. Nizami Chief Organizer/Chairman, Department of Chemistry Institute of Centre of Chemical & Biological Sciences, University of Karachi, Karachi	100,000/-

20.	2 nd International Disaster Management Conference on "Good Governance in Disaster Risk Reduction and Climate Change Adaptation" on 19-21 October, 2010 at University of Peshawar, Peshawar	Prof. Dr. Amir Nawaz Khan Director, Centre for Disaster Preparedness and Management, University of Peshawar, Peshawar	50,000/-
21.	1 st National Conference on "Physical and Environmental Chemistry" on 27-30 September, 2010 at Bara Gali.	Prof. Dr. Hasan Mahamood Khan, Director, NCE in Physical Chemistry, University of Peshawar, Peshawar	50,000/-
22.	"4 th All Pakistan Mechanical Engineering Conference, 2011" on 15 th -17 th April, 2011 at GIK Institute of Engineering Science & Technology, Topi	Mr. Faizan-ul-Haq Faculty of Mechanical Engineering, GIK Institute of Engineering Science & Technology, Topi	100,000/-
Total:			1,725,000/-

1.3.3 Financial Support to Scientific Societies for Holding Scientific Conferences and Publication of Scientific Journals

The Foundation provides funds for Scientific Societies in order to carry out their regular activities like conferences, meetings and publication of scientific journals in various disciplines. During the period, an amount of Rs.2.40 million was released to 25 societies/journals.

Sr. No	Name of the Society	Amount of Grant (Rs.)
1.	Pakistan Thalassaemia Welfare Society	100,000/-
2.	Pakistan Botanical Society	200,000/-
3.	Pakistan Physiological Society	75,000/-
4.	Pakistan Phytopathological Society	50,000/-
5.	Weed Science Society of Pakistan	100,000/-
6.	The Chemical Society of Pakistan	200,000/-

7.	The Soil Science Society of Pakistan	100,000/-
8.	The Institution of Electrical and Electronics Engineers Pakistan	50,000/-
9.	The Pakistan Materials Society	100,000/-
10.	Pakistan Mathematical Society	100,000/-
11.	Pakistan Vacuum Society	100,000/-
12.	Pakistan Association for the Advancement of Science	50,000/-
13.	Pakistan Society for Biochemistry and Molecular Biology	100,000/-
14.	Zoological Society of Pakistan	200,000/-
15.	Pakistan Pharmacological Society	75,000/-
16.	Society of Economic Geologists and Mineral Technologists	50,000/-
17.	The Agricultural Foundation of Pakistan	50,000/-
18.	Pakistan Society of Nematologists	200,000/-
19.	Horticultural Foundation of Pakistan	50,000/-
20.	Pakistan Academy of Sciences	267,800/-
Total:		2,217,800/-

S. No	Name of Journal	Amount of Grant (Rs.)
1.	Geographic Journal	40,000/-
2.	Farming Outlook	30,000/-
3.	Pakistan Oral & Dental Journal	50,000/-
4.	International Journal of Phycology & Phyco-Chemistry	30,000/-
5.	Pakistan Journal of Pharmaceutical Sciences	40,000/-
	Total:	190,000/-

1.3.4 PSF Fellowship Programme

PSF provides a limited number of research fellowships to those M.Phil and Ph.D. scholars, who do not have any other source of income. During the year, Rs.1.08 million was paid to 12 Ph.D./M.Phil students on account of research fellowships for carrying out their Ph.D/M.Phil research at their parent institutions.

S. No	Name & Address of Student	Degree	Amount of Fellowship (Rs.)
1.	Sara Mumtaz, M.Phil Scholar Department of Animal Sciences, Quaid-i-Azam University, Islamabad	M. Phil	60,000/-
2.	Ms. Saba Munawar, M. Phil Scholar Department of Bioinformatics International Islamic University, Islamabad	M. Phil	120,000/-
3.	Mr. M. Rafiq Khan, M. Phil Scholar Department of Microbiology, Quaid-I-Azam University, Islamabad.	M. Phil	120,000/-
4.	Ms. Sheza Ayaz Khilji, Ph.D Scholar, Department of Botany, University of Punjab, Lahore.	Ph. D	156,000/-
5.	Mr. Aisha Nazir, Ph. D Scholar, Department of Botany, University of Punjab, Lahore	Ph. D	156,000/-
6.	Mr. Zain Ullah, Ph.D Scholar, Department of Chemistry, Gomal University, Dera Ismail Khan	Ph. D	78,000/-
7.	Mr. Hamid Saeed Shah, M. Phil Scholar, Department of Pharmacy, University of Sargodha, Sargodha	M. Phil	60,000/-
8.	Ms. Farah Naqvi, Ph. D Scholar, Department of Plant Pathology, PMAS Arid Agriculture University, Rawalpindi	Ph.D	78,000/-
9.	Miss. Nida Haram, M.Phil Scholar, Department of Physics, Govt. College University, Lahore	M.Phil	60,000/-

10.	Mr. Muhammad Naeem Ahmad, M.Phil Scholar, Department of Physics, University of Engineering and Technology, Lahore	M. Phil	60,000/-
11.	Ms. Rubina, Ph.D Scholar, NEC in Analytical Chemistry University of Sindh, Jamshoro	Ph. D	78,000/-
12.	Mr. Rahmat Ullah, M. Phil Scholar, Institute of Electronics and Physics, University of Peshawar, Peshawar	M. Phil	60,000/-
Total:			1,086,000/-

1.3.5 Financial Support for Inventions and Innovations

Under this programme, six teams of engineering students from GIK, Swabi, UET, Lahore NUST and Air University Islamabad were co-sponsored for designing and fabrication of their



model cars for participation in the International Competition, “Shell Eco-Marathon Asia, 2011,” and an amount of Rs. 0.675 million was released. These kinds of competitions explore the potential of future technologies in terms of appropriate designing and efficient fuel consumption.

Sr. No	Title of the Project	Team Name	Institution/ University	Amount Released (Rs.)
1.	Designing and fabrication of an urban concept car for Shell Eco Marathon, Asia in 2011	EMINENT PROJECT KAAR	College of Electrical and Mechanical Engineering, National University of Science and Technology Rawalpindi.	100,000/-
2.	Designing and fabrication of a three wheeled car, pure battery-powered electric prototype vehicle for Shell Eco Marathon, Asia in 2011	TEAM EMENENTS PROJECT PRIMUS	College of Electrical and Mechanical Engineering, National University of Science and Technology, Rawalpindi.	100,000/-

3.	Designing and fabrication of a one-seater, light weight, highly fuel efficient tri-wheel car for Shell Eco Marathon, Asia in 2011	TEAM HEXA-K	Department of Mechatronics Engineering Air University, Islamabad.	100,000/-
4.	Designing and fabrication of aerial robotic vehicles for Future Flight Design Competition (FFD), Istanbul, Turkey 2011.	TEAM FALCON	Faculty of Mechanical Engineering, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology, Khyber Pakhtunkhwa.	100,000/-
5.	Designing and fabrication of self navigating intelligence vehicle systems (SNIVS).	TEAM SNIVS	College of Electrical and Mechanical Engineering National University of Science and Technology, Rawalpindi.	75,000/-
6.	Designing and fabrication of a one-seater, light weight, highly fuel efficient tri-wheel car for Shell Eco Marathon, Asia in 2011	TEAM FIREFLIES	Department of Industrial & Manufacturing Engineering, University of Engineering & Technology, Lahore.	200,000/-
Total =				675,000/-

1.3.6 Financial Support for Scientific Survey

The Foundation also provides funds for the scientific surveys to collect data on important scientific issues/problems. During the year, an amount of Rs.0.104 million was released to PCSIR, Karachi for a scientific survey entitled “Ground water sampling survey in the Thar Desert Areas of Sindh Province”.

The survey provided information to assist in the mapping and evolution of a comprehensive base line data on the chemical composition of groundwater of Thar Desert. It also helped in understanding origin of various groundwater quality contaminants. The data also helped in highlighting different other problems associated with the presence of other toxic and hazardous materials, especially fluoride, salinity, hardness and microbiological contamination etc. The results further led in producing risk maps for public agencies and NGO’s working in

Thar Desert, as regards the assessment of quality of groundwater for effective mitigation of water quality problem. Groundwater quality database established through this Survey will be made available on a separate website in the future which would also help Local District Governments and NGOs to launch drinking water development project.

2.0 SCIENCE POPULARIZATION

Need of promotion and popularization of science and technology for economic growth and to improve the quality of life of a nation can never be denied. Even so, an irrational use of science and technology has also contributed to the current environmental, social and economic problems faced by humanity in the 21st century. The dream of scientific and technological development leading to economic self-reliance cannot come true unless all the segments of the society realize the importance of science and technology. Popularization of Science through Non-formal Science Education can play an important role for creating science awareness among the masses. Need is to initiate sustainable and mega programs for motivating the students of our formal schools to study science from the grass root level.

Under the action plan of the National Science Policy 1984 and also under the draft Science Policy 2011, the Government has assigned the task of science popularization at grass root level to Pakistan Science Foundation. Most of the PSF science popularization programs were initiated in 1987-88. These programs are organized outside the formal education system particularly for the students to motivate them towards science education. The primary objective of the activities is to increase society's understanding of science. Popularization of Science is broadly understood as the system of measures aimed at the dissemination, appropriation and valuing of science and technology goods, which include critical thought, ideas and values, the history and sociology of scientific knowledge, how science is practiced, and the results of scientific research and technological development. It aims to involve individuals in the excitement of Science, in order to increase the public understanding of science through the use of interactive exhibits and every day life examples.

2.1 Science Popularization Activities

To achieve the objective of increased science awareness, PSF is undertaking a number of programs including the following:

- Science Caravan (Mobile Science Exhibition)
- Establishment of Science Centre, Museums, Herbaria & Planetaria

- Strengthening of the Laboratories of the Govt. High School of rural areas
- Organization of S&T Fairs and Traveling Expos.
- Organizing Science Poster, Essay and Quiz Competitions
- Holding Popular Science Lectures
- Donation of Popular Science Magazines and Scientific Books to Schools Universities and S&T Organizations.
- Preparation and Dissemination of Scientific Literature in the form of Leaflets Booklets, Posters and Brochures
- Financial Assistance for publication of Scientific Books
- Financial Assistance for Science Popularization activities of the other organizations
- Use of Inquiry Based Science Education “*La main a la pate-LAMAP*” for motivating the students towards science education

These activities play a significant role in capacity building of the students for adapting and thinking upon the modern scientific inventions and technologies. In addition, popularization of science also helps to enhance personal satisfaction and self-esteem in the population. At present, with the growing importance that science and technology has taken on in all arenas of social life, the popularization of science is increasingly becoming a very significant strategic issue. Details of the activities are given below;

2.1.1 Science Caravans (Mobile Science Exhibition)

Science Caravans are meant for organizing Mobile Science Exhibitions for the students and general public. Science Caravan is a specially designed truck which carries a consignment of scientific and technological concepts displayed through simple exhibits, colorful diagrams and photographs, specimens along with their write-ups, inflatable Planetarium System and working models on various subjects. The science exhibition is installed in a central school/college and the students from the neighboring schools as well as general public visit these exhibitions. The visits are arranged in collaboration with the relevant Directorate of Education. Through these exhibitions, efforts are made to develop the skills of students to think and solve every day problems by application of science and technology in their daily life because a country's ability to develop more sustainably depends on the capacity of its people and institutions to understand complex scientific phenomena and development issues so that they can make the right development choices. Within its institutional framework, PSF stresses upon stimulating and motivating the students towards scientific and technological studies for playing their appropriate role in our social development.

Through Mobile Science Exhibition the students of rural/backward area of the country are exposed to some of the most fascinating scientific and technical developments of modern world. All the narrations are bilingual (Urdu and English) and accompanied with simple illustrations. Microscopes, computers, laser holograms and working models reflecting various phenomena of physics, chemistry, mathematics and biology through simple exhibits and planetarium/film shows are the main components of Caravan Exhibitions. At present nine Science Caravan Units are in operation. Eight units are stationed in the four provinces (two for each) and one is stationed at Islamabad.

All Caravan Units continued their activities throughout the report period and organized Caravan Exhibitions in 40 centers for 480 days in various schools countrywide. More than 145,386 Students of 440 Schools visited these exhibitions. Summary of exhibitions is given below:

Summary of Exhibitions by PSF Science Caravans

Caravan Unit	Days	Schools	Students/Visitors
Federal Unit	45	80	26,650
Punjab Unit	88	88	30,221
Sindh Unit	139	95	28,592
KPK Unit	114	114	30,282
Balochistan Unit	94	63	29,641
Total	480	440	145,386

Detail of Science Caravan Exhibitions carried out by all Caravan units is placed at (Annexure–VII).

2.1.2 20th Intra and Inter Board Science Essay and Poster Competitions

Organizing Science Essay & Poster Competitions are regular and very successful activities of the Foundation. PSF in collaboration with all Boards of Intermediate and Secondary Education (BISE) of the country organizes the Competitions between the students of high schools each year. So far the Foundation has conducted twenty (20) Essay and Poster contests in which thousand of students have participated from all over the country.

In the first phase the Boards of Intermediate & Secondary Education arrange Science Essay and Poster Competition within their jurisdiction on the theme approved by PSF and submit the results of the Intra Board level for award of prizes and Inter Board Competitions. The final of the Essay and Poster Competitions are organized by PSF at Islamabad on completion of the Intra Board Competitions. Judges consisting of Professors, Scientists and Artists evaluate the essays and posters received from all over the country for best three positions (winner of the winners). To encourage the students, PSF awards cash prizes and certificates to the winner students. The amount of prize money for the best three positions of Intra Board level is Rs.5,000/-, Rs.3,000/- and Rs.2,000/- and that for Inter Board level is Rs.10,000/-, Rs.6,000/- and Rs.4,000/- respectively.

20th Science Essay Competition (2010-11) was organized on the theme “Role of Technology Parks in National Development”. The competition was held in three languages (English, Urdu and Sindhi). Students from only Board participated in the Sindhi Language Competition. About 2200 students from all over the country participated in the competition, out of them fifty six (56) students were declared winners and awarded prizes by PSF. Details of the winner students of Intra Board Science Essay Competition is placed at **(Annexure-VIII)**. Final Evaluation (Inter Board) was organized by PSF at Islamabad. A panel of judges consisting of the following evaluated the essays for the best three positions of Inter Board level competition:

- Mr. Muhammad Hamid, Principal, IMCB, F-10/3, Islamabad
- Dr. Muhammad Javed Iqbal, Chairman, Dept. of Distance, Non-formal & Continuing Education, AIOU, Islamabad

List of the winners of Inter Board level is given below:

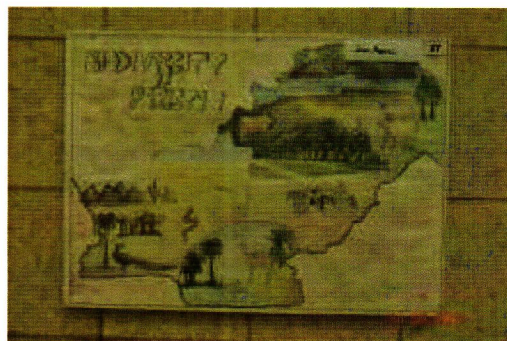
English Language

Name of Winner Student	Name & Address of School	Position
Ms. Arwa Ismail	Iqra Huffaz Girls Secondary School F-108, Block-B, North Nazimabad, Karachi	1 st
Mr. Hasseb-ur-Rahman	Pakistan Scouts Cadet College, Batrasi	2 nd
Ms. Bakhtawar Aslam	Govt. Comprehensive High School Wahdat Road, Lahore	2 nd
Ms. Sumbul Liaqat	Federal Science College (Girls Wing) Wapda Employees Town, Gujranwala	3 rd

Urdu Language

Mr. Hammad-ur-Rahman	Bahria Model School-II, Majeed S.R.E., Karachi	1 st
Ms. Aqsa Khaliq	Dukhtraran-e-Millat Higher Secondary School, Mandeer, Dinga Road, Kharian	2 nd
Ms. Fatima Khalid	The Punjab School, Township, Lahore	3 rd

20th Science Poster Competition was held on the theme “Biodiversity of Pakistan”. Forty eight (48) students were declared as winners of Intra Board Poster Competition. Detail of the winner students of Intra Board Science Poster Contest is placed at (Annexure-IX). Cash prizes and Certificates were awarded to the winner students. Final contest (Inter



Board) was organized at Sir Syed Academy, Islamabad on 1st June, 2011. A panel of judges consisting of the following evaluated the posters for the best three positions:

- Dr. Khalil Ahmed Ibupoto, Member Science, PSF
- Ms. Raheela Mushtaq, Lecturer, Fatima Jinnah University, Islamabad
- Mr. Rahat Saeed, Associate Artist, PMNH, Islamabad

List of the winners of Inter Board Science Poster Competition is given below:

1.	Ms. Shiza Majeed	Sir Syed College, Wah Cantt.	1 st
2.	Ms. Urooba Masood	C.S.S. Grammar School, Karachi	2 nd
3.	Ms. Aliza Hafeez D/o S. Hafiz Ullah Azhar	Metropolis Academy Girls Campus, Water Pump, Karachi	3 rd
4.	Ms. Ayesha Khan D/o Muhammad Khan	Govt. Comprehensive Girls High School Sargodha	4 th

2.1.3 Initiation of Inquiry Based Science Education Program “La Main a la Pate” in Pakistan

PSF has signed MoU with the Academie des sciences, France for improvement of science teaching through Inquiry Based Science Education-La main a la pate (LAMAP). Mr. Jean Saleneon, President, Academie des sciences, France and Dr. Manzoor H. Soomro, Chairman, PSF signed the MoU at Paris on 15 Dec, 2010. Mr. Irfan Nadeem, Secretary, Ministry of Science & Technology was also present at this occasion.



The program, La main à la pâte-LAMAP for Inquiry Based Science Education (IBSE) was launched 1996 by Academie des sciences, France with the support of the National Institute for Pedagogical Research and the École normale supérieure (Paris) and French Ministry of Education. In addition to France, the program has met a large success in other countries. The experience

and expertise of La main à la pâte have been spread among more than 35 countries including China, Brazil, Argentina, Belgium, Cambodia, Cameroon, Chile, Colombia, Egypt, Germany, Morocco, Senegal, Serbia, Slovakia, and Vietnam. Recently, the inquiry based approach has been started in Afghanistan, Iran, Mexico, Peru, Spain, Switzerland, Togo and United States of America.

Keeping in view the situation of Pakistan, PSF has taken the step for improving the method of science teaching in the country. According to National Education Policy 1998, Pakistan has ~145,960 primary and ~24,590 high/higher secondary schools in the public sector. Unfortunately none of them meets the standards of a modern school, either by way of learning skills and strategies or the program of studies. To address the various issues of our education system, La main à la pâte(hands-on) approach can be very help helpful in Pakistani schools. Some of PSF officers have got the opportunity to attend training programs and International workshops of La main à la pâte and visit its pilot centers in Paris. The support of Embassy of France in Pakistan remains with PSF for initiating the LAMAP. Major focus of LAMAP is to develop the questioning attitude of children through hands on experiments.

The First International Training Workshop for Pakistani Teachers was held at Islamabad on 25-30 Oct, 2010. Two French experts imparted training to teachers from 27 schools of Rawalpindi/ Islamabad and PSF officials. Certificates were awarded to the participating teachers at the end of the workshop. The teachers from both, public and private sector schools appreciated the PSF efforts for improvement of Science education in their schools. Initially, 27 schools have been included in the LAMAP Associated Network. The issues and feedback from the partner schools were provided to the Academie des sciences, France and on the basis of the same the Master Trainers designed the activities for the next Training Sessions.

The Second International Workshop on Inquiry Based Science Education was organized from 25 April to 4 May, 2011 at Islamabad. Academie des Sciences, France arranged the services of two Master Trainers viz., Mr. Michel Ouliac and Mr. Patrick Marcel for the training sessions at Islamabad. 32 teachers from 27 schools of Rawalpindi, Islamabad and surrounding areas participated in the training workshop. The workshop activities also include two days field visit of LAMAP associated schools namely, Viqar-un-Nisa Noon Girls Higher Secondary School, Rawalpindi and F.G. Model Middle School, Chatta Bakhtawar, Islamabad. The French Experts closely observed the LAMAP approach being implemented by the teachers of these schools in their classes. The Experts appreciated the efforts of Pakistani teachers in adapting the Inquiry Based Science Learning Approach, the LAMAP.

Dr. Manzoor H. Soomro, Chairman, PSF inaugurated the workshop and appreciated the efforts of French counterparts specially Embassy of France in Pakistan and Academie des Sciences, France for taking very useful step for improvement of science education in Pakistan. He also thanked the LAMAP associated teachers for their interest and devotion in initiating La main a la pate in their schools. He assured best possible support from PSF in cash (grants for schools) and kind (training for teachers) in implementation of LAMAP in the class rooms. He also thanked the Master trainers/French Experts for their efforts to introduce LAMAP in Pakistan.

French Experts Mr. Michel Ouliac and Mr. Patrick Marcel shared their findings taken during the visit of two LAMAP associated schools with the teachers. Video clips of the class room activities were shown and discussed in detail. A number of hands on activities were introduced and explained to the teachers as part of the workshop activities. The teachers also delivered lectures and performed hands on activities in the class rooms at F.G. Model Middle School, Chatta Bakhtawar. The Experts shown their pleasure regarding the performance of the teachers and the activities carried by them in LAMAP associated schools. PSF has established Science Clubs in 15 schools. Grant amounting to Rs.25,000/- has been provided to each schools. List of the schools is placed at **(Annexure-X)**.

At the closing session, Dr. Khalil Ahmad Ibupoto, Member Science, PSF distributed certificates among the participants. He appreciated the devotion of the teachers and commitment of PSF team on successful holding the training workshop.

2.1.4 International Traveling Expo on “Biodiversity”.

Organizing S&T Fairs and Expos is one of the important science popularization programs of the Foundation on regular basis. During last few years PSF has organized the following mega Expos.

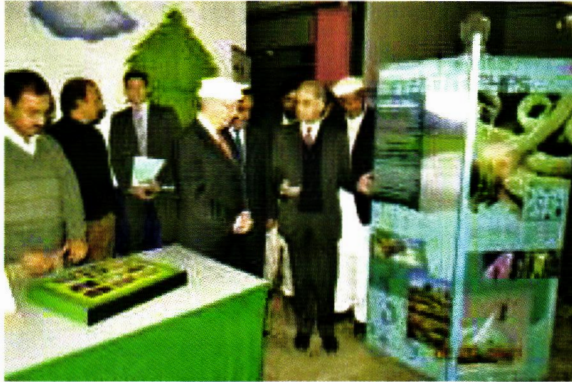
During the year 2010-11, PSF in collaboration with Embassy of France organized International Traveling Expo on Biodiversity entitled “Biodiversity is Life- It’s Our Life” w.e.f. 14th January to 31st March 2011. It was prepared by UNESCO, Centre Sciences-France and partners and



arranged with support of Embassy of France in Pakistan. The Expo moved across the country through Islamabad, Abbottabad, Faisalabad, Khairpur and Quetta. In total, more than 38,000 student, teachers and general public participated in the expo in above mentioned cities.

Islamabad: - The Opening ceremony of the Expo was held on 14th January, 2011 at Islamabad Model College for Girls F-7/4. Ms. Farhat Rajpar, CSO, PSF welcomed the participants. Engineer Sandie Favier, Attaché for Science and Technology, Embassy of France highlighted the role of her good office for various science promotional activities in Pakistan. She ensured best possible cooperation in future to PSF. Master Trainer of the Expo, Mr. Guy Antoine, Dy. Director, Centre Sciences, Orleans-France briefed the audience about the Expo. Chairman PSF, Dr. Manzoor H. Soomro addressed the gathering and thanked French embassy for its cooperation. The Chairman highlighted the importance of biodiversity, threats and possible ways for its conservation. The Expo was concluded on 28 Feb 2011 from Islamabad. The Expo was also arranged at Jinnah Convention Centre, Islamabad during Knowledge Festival on 21-25 Feb, 2011. Dr. M. D. Shami, Vice President, Islamic World Academy of Sciences and Former Chairman, PSF was the chief guest at this occasion, Dr. Anwar Nasim, Advisor-Science, COMSTECH also addressed the audience. More than 18,000 students and participants visited the Expo at Islamabad.

Abbottabad: -After Islamabad, the Expo was shifted to Abbottabad at Govt. Post Graduate



College No. 1. H.E. Ambassador of France to Pakistan, Mr. Daniel Jouanneau inaugurated the Expo on 2 Feb, 2011. Prof. Dr. Sakhawat Shah, V.C. Hazara University, Mansehra and Dr. Khan Gul Jadoon, Director, CIIT, Abbottabad attended the inaugural ceremony. Prof. Sakhawat Shah informed that Pakistan has the largest

Biodiversity range starting from zero meter from sea level to the high mountains of Karakoram, Hindukush and Himalayas of 7000 meters height. Prof. Khan Gul Jadoon discussed about various activities of CIIT for conservation of Biodiversity. The Ambassador of France also interacted with the students of CIIT, Abbottabad Campus. The closing of the Expo from Abbottabad was held on 11 Feb, 2011. About 3,000 visitors and students from 26 schools visited the Expo at Abbottabad.

Faisalabad: -The third destination of the Expo was University of Agriculture Faisalabad, where it was inaugurated jointly by Prof. Dr. Iqrar Ahad Khan, V.C. UAF and Dr. Manzoor H. Soomro, Chairman, PSF on 17 Feb, 2011. Dr. Fredric Bessat, Higher Education and Scientific Attaché of France to Pakistan, Prof. Dr. Muhammad Qaiser, V.C. Federal Urdu University of Arts, Science and Technology, Karachi and Dr. G. Raza Bhatti, Director, Centre for Biodiversity and Conservation, Shah Abdul Latif University, Khairpur were among the other distinguished guests. The Expo was concluded from Faisalabad on 26 Feb, 2011 after catching the attention of about 4,200 students and visitors.

Khairpur: -The next destination of the Expo was Shah Abdul Latif University, Khairpur, there it held from 4 to 17 March, 2011. Mr. Christian Ramage, Consul General of France, Karachi and Prof. Dr. Nilofer Shaikh inaugurated the Expo. Dr. Manzoor H. Soomro, Chairman, PSF, Ms. Farhat Rajpar, Chief Scientific Officer and Mr. Amjad Hussain, Joint Scientific Advisor, MoST also participated The Expo. Dr. G. Raza Bhatti delivered his keynote talk on “Biodiversity and Human Life”. The Expo on Biodiversity proved a milestone towards commemoration of International Year of Biodiversity-2010 and beginning of World

Biodiversity Decade (2011-2020). The Expo was closed on 17 March and then shifted to Quetta. About 6,500 students visited the Expo at Khairpur.

Quetta: -The grand finale of the Expo was held at University Law College, University of Balochistan, Quetta on 31st of March 2011. Mir Changez Khan Jamali, Federal Minister for Science & Technology presided over the concluding ceremony. H.E. Ambassador of France to Pakistan, Mr. Daniel Jouanneau



was the Guest of honour at this occasion. Mir Changez Khan Jamali, in his address emphasized on importance of S&T for our socio economic development. He told that after taking the charge as Federal Minister, he has allocated additional funds of Rs.730 million to S&T organization. He urged the scientists and engineers of Balochistan to come forward and undertake R&D for socio economic development of the country. Addressing the audience, H.E. Ambassador of France to Pakistan, Mr. Daniel Jouanneau expressed his pleasure on successful holding of Biodiversity Expo. He appreciated PSF, MoST, University of Balochistan and other stakeholders for their efforts to promote and popularize science in Pakistan. Prof. Dr. Manzoor H. Soomro briefed the audience about PSF, statutory functions and major activities. Dr. Soomro thanked the Vice Chancellor, University of Balochistan, Prof. Dr. Abdul Nabi for providing the venue and support in organizing the Expo at Quetta. About 8,000 students and general public participated in the Expo at Quetta.

2.1.5 World Science Day for Peace and Development

November 10 of each year was proclaimed as World Science Day for Peace and Development - WSDPD by UNESCO during the General Conference in 2001. The purpose of the WSDPD is to renew the national as well as international commitment to science for peace and development and to stress the use of science for the benefit of the society. PSF arranges a number of programs for commemoration of the World Science Day for Peace and Development (WSDPD) each year.

On November, 10, 2010, Convention of Scientists was organized at PSF Auditorium, the Federal Minister for S&T Senator Muhammad Azam Khan Swati was the Chief Guest at this



Muhammad Zakaullah (1996-2006). Cash award of Rs.100,000/- to each of the awardees was also paid.

2.1.6 UNESCO Participation Programme 2010-11

Under the UNESCO Biannual Participation 2010-11, PNCU has approved (Nov 2010) PSF project for strengthening of PSF Science Centre, Faisalabad. An Inflatable Planetarium System and working, models will be added in the exhibits of Science Centre. Under this sandwich programme, PSF has to contribute an equivalent amount from its own resources for Strengthening of Science Centre, Faisalabad over the next one year.

2.1.7 Financial Assistance to High Schools and Other Organizations

In addition to its own Science Popularization activities, the Foundation provides financial assistance to high schools for strengthening of the Laboratories, preference in this regard is given to the schools of rural areas having science labs and teachers but lack behind in lab equipment. Grants are also provided to other S&T Organizations for organizing their science propagation activities. During the year, laboratories of 13 schools were improved. Funding was provided to 6 S&T organizations for organization their activities related to popularization of science. In total, a sum of Rs.891,500/- was incurred in this regard. Detail of the schools and S&T organizations provided with financial assistance is placed at **(Annexure-XI)**.

2.1.8 Donation of Scientific Literature to High Schools

Donation of Popular Science Magazines and Scientific Books is one of the regular and important activities for science popularization. 18,000 copies of Popular Science magazine "Monthly Global Science" were distributed to 1500 schools during the report period. In addition, more than 12000 copies of scientific brochures were also distributed among the

students through science caravans. Scientific Journal “The Fountain” published by The Light Publishing, Turkey was provided to all Caravan units, PMNH and PASTIC offices.

2.1.9 Flood Relief Activities

Due to heavy rains and flood during July-August 2010 every day life was badly disturbed. A number of human beings lost their lives and thousands of people were compelled to live under open sky due to loss/damage of their homes, cattle, properties and lands. In the hour of natural catastrophe, Pakistan Science Foundation (PSF) took active steps to help the brothers and sisters in need.



PSF used its entire means in the Flood relief and rehabilitation activities. In order to help the flood victims, PSF collected funds from all of its employees and its subsidiary organizations viz., Pakistan Museum of Natural History (PMNH) and Pakistan Scientific and Technological Information Centre (PASTIC) which were utilized for helping the flood victims.

Apart from this, PSF directed its sub-offices/science centers at Peshawar, Sukkur, Faisalabad, Karachi and Quetta to work in close collaboration with the local Government and NGOs already involved in the relief activities. In this context, all the trucks and vans of PSF Sub-centers were utilized for the transportation of relief goods and movement of mobile medical units. PSF sub-centre at Faisalabad worked with Faisalabad Chamber of Commerce and Industry (FCCI) and the Caravan trucks participated in transportation of relief goods to the Muzafargarh area, which was one of the worst disaster affected district. Similarly, in Balochistan the Caravan Truck was used as mobile medical unit in collaboration with Baluchistan Rural Support Programme (BRSP).

PSF sub office in Peshawar joined hands with National Bank of Pakistan (NBP) and Sarhad Rural Support Programme (SRSP) for the delivery of relief goods to the affectees in the Chirtal, Charsadda, Kohat, Nowshera, Swat and Swabi areas. Whereas in the second stage, the most important step was rehabilitation in the regard PSF aims to help in re-building the

schools and colleges and establishing them back to their feet. This can be by the provision of both human resource and capital by the PSF.

2.2 Science-Media Forum

PSF continues to explore different ways and means for dissemination of information on science related activities. As in present age of information technology, the media, both electronic and print, is playing a very important role in dissemination of information and socio-economic development of any country, PSF planned to utilize this medium for promotion of science in the country. To sensitize media on importance of science in national development and strengthen coordination with media organizations and media persons, PSF Media Cell initiated to arrange a Science-Media Forum titled “Where Science and Media Meet” at PSF auditorium on 26 -27th May 2011. Media personnel from across the country participated in the forum to discuss ways and means to create mass awareness on importance of science and technology.

Science-Media Forum Programme

PSF Media Cell under the guidance of Chairman PSF, Prof. Dr. Manzoor H. Soomro chalked out a detailed program of the Science-Media Forum for its smooth proceedings. The detail of the program is as under:

Proceeding of the Science-Media Forum

The 1st day proceedings of the Forum presided by Chairman PSF, Prof. Dr. Manzoor H. Soomro initiated on May 26, 2011. PSF Member Science and PASTIC Director General Dr. Khalil Ahmad Ibupoto, COMSTECH Advisor Science Dr. Anwar Nasim, Pakistan Museum of Natural History (PMNH) Director General Dr. Syed Azhar Hasan and PSF Chief Scientific Officer Ms Farhat Rajpar participated the event. Eminent scientists from scientific organizations and universities and PASTIC & PMNH representatives also attended the forum.

Ms Rajpar said PSF established in 1973 through an act of National Assembly and working under the Ministry of Science and Technology was a premier agency for the promotion and funding of scientific research and popularization of science in Pakistan.

Addressing on the occasion, Chairman PSF, Dr. Manzoor H. Soomro highlighted the PSF functions and achievements to promote S&T research activities and popularize science in the

country. PSF was making its all efforts to achieve these objectives and media should support to highlight scientific activities in the country because due to different reasons S&T is not getting its due importance in mass media. He added that PSF in collaboration with French Embassy had started a project that is inquiry-based learning of science at primary standard level. PSF Science Centers, PASTIC Centers and Nine Science Caravans are busy disseminating scientific knowledge among masses, especially the students & research scholars.

Keynote Speaker Dr. Anwar Nasim, Advisor Science, COMSTECH, emphasized on contribution of non-governmental individuals was a must for any change in the society for peace, prosperity and development of the country. He added that the media personnel should shoulder their responsibility to make people aware of the importance of scientific knowledge and develop a knowledge-based society and there is a need to create awareness about importance of science at grass root level. Mr. Ali Mustafa Zaidi Paras, Editor Technology Times, speaking on “Print Media Vital for Popularization of Science and Technology”, highlighted the role of print media including, newspapers, magazines, journals, books and posters etc in dissemination of information on science and technology. He said the print media left a lasting affect on the minds of readers and gave in-depth information to them.

Ms. Kausar Samreen, Program Manager, Pakistan Broadcasting Corporation, spoke on “Role of Radio Productions for Image Building of S&T Organizations”. She added that PSF in collaboration with Radio Pakistan, Ministry of Information and Broadcasting as well as private FM radio channels can spread scientific information for socio-economic development of the country. Wajid Zulqarnain, Senior Producer, Duniya TV, highlighted “Role of Television in Promotion of Research and Development. He said conversion of scientific information into an easily understandable and interesting format is must in science popularization & dissemination. He said the scientific organizations should get train some specific persons in this regard and those people should deal with media to meet requirements of program productions.

Open discussion

The participants of the forum including media personnel and scientists took active part in an open discussion on “Promotion of S&T through Mass Media – Ways and Means”. They gave

various valuable recommendations to popularize science in the country. Chairman PSF, Dr. Manzoor H. Soomro assured participants that the recommendations formulated with consensus will be implemented in letter and spirit and this interaction of scientists and media people would be strengthened as a follow up of the forum to bridge the communication gap between media and scientific organizations.

Recommendations

Following are the recommendations of the participants of the Forum addressing various areas to enhance impact of media in science popularization & promotion.

a) Identification, Evaluation and Monitoring

To assess the current quantity and quality of science coverage in mass media, there is a need to conduct a survey as to how much time/ space the media (print and electronic, both) devotes to address science-related issues/ problems; and discuss their potential solutions. In this regard Pakistan Science Foundation may establish a monitoring desk with the help of journalists and scientists. (Note: Azmat Ali Khan, former Director SIC, PCSIR has already devised a systematic procedure for this purpose).

b) Science-Media Interaction

- In order to focusing the interaction of science and media, participants suggested that; facilitate, catalyze and encourage the accurate reporting of science in mass media, PSF should also establish a Science Media Center/Cell. Besides serving as a hub for science popularization through mass media, this Center may also undertake the responsibility of bridging the gap between scientists and media persons; and keep a constant liaison between media and science, beyond specific events.
- To set up, advice and guide the said Science Media Center, Working Group on Science-Media Coordination should be established comprising of professionals from science and media (not exceeding 5).
- Science-media coordination meetings/ workshops should take place from time to time with regular intervals at different places of Pakistan, so that more journalists from those regions and/or scientists from nearby S&T/ R&D institutions may also participate & benefit from these activities.
- The institutions of S&T/ R&D organizations should have regular arrangements to facilitate the coverage of their activities especially focusing on the socioeconomic uplift of the country in mass media, so that the laypeople of Pakistan may also acknowledge their importance, and rightly appreciate their efforts.
- Scientists should keep in touch with journalists reporting science through various media outlets, so that they remain engaged for a longer time.
- A comprehensive, detailed list/ directory of active scientists working in various disciplines may be maintained by PSF, so that the media can effectively communicate with them.

- There has to be a Database of Reporters/ Journalists actively pursuing science reports in the media.
- As a follow up of this forum there should be a training programme to prepare good press release and to approach the most suitable person for its publication & transmission.

c) Capacity Building

- Currently, scientists and journalists are living in different spheres: scientists/ experts seldom know the suitable language for media and are unaware of how mass media functions, while reporters/ journalists remain unaware of science and conduct of scientific research. With a better understanding/ familiarization of each other's disciplines and functioning, the said issue can be effectively rectified. In this regard, tailor-made, capacity building workshops/ certificate courses can be organized separately addressing journalists and scientists.

d) Science and Scientist's Coverage in mass media

- Stories with greater socioeconomic value may be highlighted, for example the potential role of precious and semi-precious stones in Pakistan's GDP growth; snakes of Pakistan; Pollen allergy; ethno-botanical studies; fish industry and fossil treasures in Pakistan.
- To facilitate the coverage of science-related international years/ days in mass media, PSF may prepare/ print literature in advance, and distribute it among the various media outlets well before the event.
- Besides mainstream media, non-mainstream and regional/local media should also have attention for the promotion/ popularization of science in far flung rural areas of Pakistan.
- PSF should also try to provide readymade, usable material to the media, so that it can better be used to strengthen correct and accurate science coverage in mass media.
- Documentaries for radio, including drama-style documentaries (docu-drama) about science, including all the important elements of storytelling be encouraged and supported through PSF Science-Media Centre/Cell.
- PSF should also provide funds for science-related programs for electronic media.
- Weekly program on science developed and presented by PSF on national TV/ Radio.
- Keeping the scarcity of resources in mind, Science web TV/ Web Radio may also serve as better alternate.

e) Science for Kids/ New Generation

- Science popularization should also focus creating scientific thinking in kids, so that they understand the concept and ask right questions about science, not just memorizing it.
- There is a need to develop science programs for kids, with more practical approach – so that kids can learn more by doing science.

- PSF needs to involve professionals, who can better present scientific content in a creative style – especially for kids.
- Career development/ guidance in science is also important for the popularization of science effectively.
- Students may also be designated as Volunteers/Junior Scientists at schools/colleges.

Award of Souvenirs to Speakers

The proceedings of the Day-One program of the Forum ended with Vote of thanks by PSF Member Science Dr. Khalil Ahmed Ibupoto. On behalf of PSF, he expressed his gratitude to all the participants who spared their valuable time and traveled to Islamabad for taking part in the forum. Souvenirs were also awarded to the speakers of the Forum by Chairman PSF, Prof. Dr. Manzoor H. Soomro as a token of appreciation for their support and collaboration to make the forum a success.

Forum participants' Visit to PMNH and PASTIC

Second day of forum on May 27th the participants of the forum visited PSF subsidiary organizations, Pakistan Museum of Natural History (PMNH) & Pakistan Scientific & Technological Information Center (PASTIC) to get first hand information about their achievements and activities by respective Director Generals. PMNH Director General Dr. Syed Azhar Hassan gave a detailed presentation to the participants of the forum on PMNH functions.

Director General, PASTIC, Dr. Khalil Ahmed Ibupoto explained the journalists about the working of PASTIC, dissemination of Scientific and Technological Information to the Scientists, Researchers, Engineers, Entrepreneurs, Industry and Citizens of Pakistan.

Media Coverage of Forum

Science Media Forum received an excellent coverage by the leading National print & electronic media. The List of Participating journalists from Electronic & Print Media and news clippings and photographs of the coverage are given at **Annexure-XII**.

3.0 INTERNATIONAL LIAISON

Liaison with International scientific organizations in different countries serves as a means to try and solve various scientific problems by sharing knowledge, exchange of expertise and by

undertaking collaborative research projects. During the report period, thirty proposals of PSF, PASTIC & PMNH for S&T collaboration with European Commission, Cuba, Germany, Turkey, China (NNSFC), Tajikistan, Argentina, OIC, and Uzbekistan were forwarded to MoST for consideration under various S&T Protocols/Agreements/MoUs signed by the Government of Pakistan.

3.1 Revival of Activities under MoU Signed between PSF and NNSF China

Pakistan Science Foundation (PSF) had signed MoU with National Natural Science Foundation of China (NSFC) in 1992. Earlier, a number of activities, such as collaborative research projects and exchange visits of scientists from Pakistan & China were undertaken. Planning & Development Section prepared a proposal entitled “Study Visit/Exchange of Scientists between Pakistan Science Foundation and National Natural Science Foundation of China (NNSFC) and related S&T Organizations of China” and sent to Dr. Yinglan Zhang, Director of Division & Professor, Bureau of International Cooperation, NNSFC in order to explore the possibilities of short & long term collaborative programmes with NNSFC. The concurrence of the Chinese Authorities has been received Pakistan and visit programme of Pakistani delegation being finalized in consultation with NNSFC and MoST for approval.

3.2 ECO Science Foundation

The foundation will be established as specialized agency of ECO to function as a reservoir of highly skilled scientific and technical manpower and to facilitate promotion of scientific research among member states. Regarding the establishment of ECO Science Foundation, in pursuance of the 1st Expert Group Meeting (1st EGM) which was held in Islamabad on 3-4 September 2007 to discuss and finalize inter alia the Additional Protocol to the Charter of ECO Science Foundation, the 2nd EGM was held in Tehran, Iran on 30-31 August, 2010 to review the progress made for establishment of ECOSF with particular reference to decisions made in 1st EGM and prepare for the 1st Meeting of Board of Trustees of ECOSF in Pakistan in the Chairmanship of Minister for Science and Technology, Govt. of Pakistan. The Minister for Foreign Affairs, Government of Pakistan had



also announced in COM prior to Summit meeting in Iran in December 2010 that the 1st BoT of ECOSF will be held in January 2011. The meeting of BoT was scheduled twice in January and April, 2011 to approve the Recommendations of EGMs for establishment of ECOSF and render it functional, however, both times, it could not be held due to un-fulfillment of required quorum.

4.0 PLANNING & DEVELOPMENT

4.1 On-going Development Project: “Participation of Scientists and Technologists in International Science Conferences, Seminars, Workshops and Trainings Abroad (Phase II)”

The project is aimed at providing financial assistance to Pakistani scientists, technologists, doctors and engineers working in R&D organizations and educational institutions as well as Ph.D students for:

- i) Participation and presentation of research papers in International conferences, seminars & workshops abroad
- ii) Attending short term (1-2 weeks) specialized training courses or obtaining training on specialized laboratory equipment in laboratories of the advanced countries
- iii) Undertaking a part of research work for which facilities are not available in Pakistan.

During the year 2010-11, an amount of Rs.4.116 million was allocated for the project activities however, only an amount of Rs.1.12 million was released by MoST which was utilized for payment of travel grants to 7 scientists/technologists.

A total of 24 travel grant requests were approved by the Committees whereas 6 were not recommended for approval consequently seventeen (17) scientists availed the grants while remaining seven (07) could not availed due to visa problems/personal reasons. The list of Scientists who have availed the travel grants is placed at (**Annexure –XIII**).

4.2 Development Projects submitted to MoST

Under the “Aghaz-e-Haqooq-e-Balochistan Package” and “Kohlu Development Package”, of the Government, PSF prepared two development projects for awareness of scientific & technological advancement among students and general public of Balochistan. After obtaining concurrence of the Government of Balochistan, the following projects were submitted to MoST for consideration and approval by the relevant forums i.e., DDWP/CDWP.

Sr. No	Project Title	Duration	Amount (Rs in Million)
1.	Establishment of two Science Centers in Balochistan	3 years	176.66
2.	Establishment of 50 Science Clubs in High Schools of Balochistan	2 years	60.00

One Science Centre shall be established at the Lasbella University of Agriculture, Water and Marine Sciences (LUAWMS), Uthal while the other will be at Balochistan University of Information Technology, Engineering & Management Sciences (BUIITEMS), Quetta. Both the Universities have provided a piece of land (about 2 acres) for construction of Science Centre at their premises and Memorandums of Understanding have been signed with them.

4.3 PSF as Focal Point of MoST for “Establishment of S&T Segment” at National Monument Museum, Islamabad

A “National Achievement Segment” was established at National Monument Museum, Islamabad by the Lok Virsa, Ministry of Culture & Tourism. One part of this segment was to display the achievement of S&T Sector in Pakistan since 1947 to 2010. Pakistan Science Foundation being the focal organization on behalf of Ministry of Science & Technology collected material from all S&T organizations and provided to Lok Virsa Authorities, as per their requirements i.e.,

- Written material in respect of the organization.
- Photographic material (300 Resolution)
- Visual materials like VCDs, DVDs, tapes etc.

**PAKISTAN MUSEUM OF NATURAL HISTORY
(PMNH)**

1.0 Natural History Research

1.1 Botanical Sciences Division

1.1.1 Field Work

Carried out field work in various localities of Attock, Chakwal, Mianwali, Bahawalpur, Thar, Sukkur, Ghotki, Kot Addu, Rawalpindi and Gilgit districts. Collected some 3000 plant specimens along with field data and digital photographs. These were preserved, identified and deposited in the PMNH reference collection of plant specimens.

1.1.2 Laboratory Work

- Identified 2000 plant specimens including higher and lower plants, catalogued them and arranged systematically in the higher plants Herbarium.
- Preserved and disinfected 400 specimens of mushrooms and other fungi and arranged them systematically in the Mycological Herbarium.
- Mounted, labeled and arranged 3000 higher plant specimens of the Herbarium, BSD.
- Entered data of 90 specimens in the database of Biodiversity and Global Networks (BGN) for use in the PMNH website.

1.1.3 National Research Projects and Reports

Continued the PSF funded project on "Taxonomic and Ethnobotanical studies of Economically Important Plants of Potwar plateau and the Galiat with reference to their trade". Annual Technical Report has been submitted.

1.1.4 Publications

- Leghari, M. K., Idris, M. and Ahmed, I. 2010. Qualitative, quantitative and vertical distributions of blue-green algal species at tobacco field of Mardan during 2006. *International Journal of Phycology and Phychochemistry*. 6(1): 21-28.
- Hussain, F., Leghari, M. K., Ahmad, H. Shah, S. Z. and Saleem, M. 2010. Qualitative and quantitative diversity of unicellular green algal species from various localities of Peshawar Valley. *International Journal of Phycology and Phychochemistry*. 6(2): 81-88.
- Hussain, F., Leghari, M. K., Ahmad, H. Shah, S. Z. and Saleem, M. 2010. Taxonomic study of order Chlorococcales (Volvophycota) from Peshawar Valley. *International Journal of Phycology and Phychochemistry*. 6(2): 131-140.
- Afzal, R., Mughal, S.M., Munir, M., Sultana, K., Qureshi, R., Arshad, M and Leghari, M.K.. 2010. Mycoflora Associated with Seeds of Different Sunflower Cultivars and its Management. *Pak. J. Bot.*42(1): 435-445.
- Kayani, A.K., Qureshi, S., Kayani, W.K., Qureshi, R., Waheed, A., Arshad, M., Gulfraz, M. and Leghari, M.K.. 2010. Assessment of Wheat Yield Potential after Cropping Mungbean (*vigna radiata* (L.) Wilczek). *Pak. J. Bot.*42(3): 1535-1541.
- Gilani, S.A., Qureshi, R.A., Khan, A.M. and Potter, D. 2010. A molecular phylogeny of selected species of genus *Prunus* L. (Rosaceae) from Pakistan using the internal

transcribed spacer (ITS) spacer DNA. African Journal of Biotechnology Vol. 9 (31): 4867-4872.

- Sahreen, S., Khan MA, Khan MR, Khan RA. 2010. Leaf epidermal anatomy as a taxonomic feature in the genus *Silene* (Sileneae-Caryophyllaceae) from Pakistan. Biodicon. 3(1): 93-102.
- Khan, M.A, Ahmad, M., Zafar. M., Sultana, S., Marwat, S.K., Shaheen, S., Leghari, M.K. Jan, G., Ahmad, F., and Nazir, A. 2011. Medico-botanical and chemical standardization of pharmaceutically important plant of *Tricholepis chaetolepis* (Boiss) Rech. f. Journal of Medicinal Plants Research.5(8): 1471-1477.
- Ali, A., Shinwari, Z.K, and Leghari, M.K. 2011. Diversity of the genera of Chlorophyta in fresh waters of district Swat N.W.F.P. Pakistan. Pak. J. Bot.43(3): 1759-1764.
- Gilani,S.A., Qureshi, R.A..Khan, A.M.. Ullah, F., Nawaz, Z., Ahmad, I.and Potter, D. 2011.A molecular phylogeny of selected species of Genus *Prunus* L. (Rosaceae) from Pakistan using the TRN-L & TRN-F spacer DNA. African Journal of Biotechnology Vol. 10 (22): 4550-4554.
- Bhatti, M. I., Tabassum, K. A. and Firoza, K.2011. New records of Mesorhabditidae (Nematoda: Rhabditida) from different habitats of Sindh and Punjab, Pakistan. Pak. Journ. Nematol.29(2): 119-137.
- Musakhail, S.W., Jiskani, M.M. and Bhatti, M.I.2011. Growth and Yield of Oyster Mushroom (*Pleurotus ostreatus*) as affected by Gram Powder amendment in substrate. Pak. Journ. Phytopathol. 23(1): 35-41.
- Munir, S.. Qureshi. R.A. 2011. Diversity of Fungi/gilled mushroom Genus *Coprinus*. Online Journal: Biological Diversity and Conservation. Biodicon, Pp: 160-180.

1.1.5 Exhibitions Organized

- Organized a stall at Capital Development Authority Environment Exhibition during opening ceremony of Spring Tree Plantation 2011, for creating awareness in general public about the importance of biodiversity.
- Displayed a stall on the occasion of "Spring Flower Festival, 2011" jointly organized by The National Horticultural Society of Pakistan and the Department of Horticulture, PMAS Arid Agriculture University, Rawalpindi, from 30th March to 3rd April. It was inaugurated by Mr. Sardar Latif Khosa, Governor of the Punjab. The Governor appreciated the activities carried out by PMNH.

1.1.6 Seminars/Trainings/Workshops Attended

- Two BSD officers attended an International Conference "Biodiversity is our Life" at Shah Abdul Latif University, Khairpur on 29-31, December and presented their research papers.
- Director BSD participated and presented research paper in the 1st National Phycological Conference at Department of Botany, GC University Lahore from 30-31 March, 2011.
- One officer acquired five days training in Effective Project Management from Pakistan Planning and Management Institute, Islamabad on 7th-11th March 2011.

1.1.7 Services Rendered to other Organizations

- Evaluated 4 Ph. D. and 8 M. Phil. theses and carried out viva-voce of students of Department of Plant Sciences, Quaid-e-Azam University.
- Supervised Ph. D. thesis research of 2 students of Quaid-e-Azam University.
- Reviewed 3 research articles for African Journal of Biotechnology.

1.1.8 Higher Studies

- Dr. S. Aneel Ahmed Gilani, Research Associate. BSD, obtained Ph. D. degree in Plant Sciences from the Department of Plant Sciences, Quaid-e-Azam University, Islamabad.

1.2 Earth Sciences Division

1.2.1 Field Work

- One day field trip was carried out with the students of Bahria University, Islamabad to impart them practical knowledge of working in the field. PMNH geologists along with the students visited the localities of Gunda Kas and Dhok Pathan areas.
- PMNH geologists visited Chinji, Bhilomar and Kallar Kahar areas with Geo television team for recording of program "Geo Ajuba". In this program Geo team was told about the evolution of vertebrates and method of finding fossils in the field and their preservation.

1.2.2 Laboratory Work

- Identified 150 rock samples and 500 vertebrate fossils.
- Collected enamel hypoplasia data from 30 Rhino fossils under the project "Comparative Studies on Enamel Hypoplasia in Siwalik Rhinoceroses.
- Carried out cataloguing of 100 rock samples during previous years.
- Selected about 10 chromite samples dispatch to Granada University, Spain for laboratory studies. 646 samples have been clean, washed and catalogued.

1.2.3 International Collaborative Research Projects

"Early Triassic Biostratigraphy and Carbon Isotope Stratigraphy of the Salt Ranges". A collaborative research project between Institute and Museum of Palaeontology of the University of Zurich (PIMUZ), Switzerland, and PMNH.

1.2.4 Publications

- Iqbal, N. 2010. On the Paleoclimate and Paleogeography of Permian Rocks of the Salt Range, Pakistan. *Journ. Himalayan Earth Sciences* 43: 33– 33.
- Antoine, P.O., Downing, K. F., Crochet, J. Y., Duranthon, F., Flynn, L., Marivaux, J, Matais, L., Rajpar, A, R. and Roohi, G. 2010. A reservation of *Aceratherium blanfordi* Lydekker, 1884 (Mammalia: Rhinocerotidae) from the early Miocene of Pakistan: Postcranials as a key. *Zoological J. Lin Society, London*. 160: 139 – 194

- Dhuime. B., Bosch, D., Garrido, C.J., Bodinier, J. –L., Bruguier, O., Hussain, S.S., Dawood, H., 2009. Geochemical architecture of the lower- to middle – crustal section of a Paleo-island arc (Kohistan Complex, Jijal-Kamila area): Implications for the evolution of an oceanic subduction zone. *Jour. Petrology*. 50(3):531 – 569.
- Heuberger, S., Celerier, B., Burg, J.– P., Chaudhry, M.N., Dawood, H.,& Hussain, S.S., 2010. Paleostress regimes from brittle structures of the Karakoram-Kohistan suture zone and surrounding areas of NW Pakistan. *J. Asian Earth Sci.* 38: 307 – 335.
- T. Bruhwiler, Hugo. B., David. W, Elke. H., Peter. H., Roohi, G., Aamir, Y., Rehman, K.2010. Smithian (Early Triassic) Ammonoids from the Salt Range, Pakistan. Special paper, *Journal of Paleontology*. Pp. 1- 226.
- Antoine, P.-O., Métais, G., Orliac, M.J., Crochet, J.-Y., Flynn, L.J., Marivaux, L., Rajpar, A.R., Roohi, G. & Welcomme, J.-L. In press (2011). Mammalian Neogene biostratigraphy of the Sulaiman Province, Pakistan. In: M. Fortelius, L.J. Flynn & Wang Xiaoming (eds.), *Mam. Neogene stratigraphy*, Columbia University Press.
- Elke Hermann, Peter A. Hochuli, Hugo Bucher, Thomas Brühwiler, Michael Hautmann, David Ware, G. Roohi. In press (2011). Terrestrial ecosystems on following the end-Permian mass extinction. *Gondwana Res.* (2011), doi:10.1016/j.gr.2011.01.008 (1342-937 Published by Elsevier B.V. All rights reserved. Contents lists available at ScienceDirect, Gondwana. Research Journal homepage: www.elsevier.com/locate/gr)
- Mahmood, K., Papp, J. and Quicke, D. 2010. Two new Afrotropical genera of Braconine wasp (Hym: Braconidae) with two new species. *Zootaxa*.2476:14-22.

1.2.5 Exhibitions Organized

- One day exhibition on “Mineral Deposits of Pakistan and its potential” was organized by PMNH at National Institute of Civil Engineering (NICE). National University of Science & Technology (NUST), Islamabad on 24th May 2011.

1.2.6 Seminars/Symposia/Trainings/Workshops Organized

- Earth Science Division of PMNH organized 2-days workshop on “Civil Engineering Materials-Rocks/Minerals” at the School of Civil and Environmental Engineering. NUST, Islamabad. PMNH geologists presented lectures on the geology of Pakistan, identification of minerals and geological structures (geometry of rocks).

1.2.7 Seminars/Trainings/Workshops Attended

- Participated in 1 day Teachers Training workshop organized by Gujranwala Arts Council. A documentary on *Baluchitherium* was shown. An exhibition on the fossils of Pakistan was also arranged in the GAC art gallery.

1.3 Zoological Sciences Division

1.1.3 Field Work

- As a result of MoU signed between Zoological Survey Department (ZSD) and PMNH all preserved and stuffed animal samples of ZSD were transferred to PMNH along with relevant data, catalogue registers, storage cabinets etc. The collection was housed

at Zoological Sciences Division of the PMNH. The addition of these samples greatly strengthened the Zoological reference collection of PMNH.

- Carried out field studies on the fish fauna of Logar River areas, Afghanistan in collaboration with Hagler Bailly-Pakistan.
- Conducted 4 days studies to monitor the impact of insecticides and pesticides on the biodiversity in cotton crop (WWF Project).
- Visited the study site “Mangla Reservoir” for establishment of Mahasher fish national park in AJK in the capacity of one of the stakeholders.

1.3.2 Laboratory work

- Identified and Cataloged 580 zoological samples including invertebrates and vertebrates.
- Took morphometric data of 15 *Trapelus* specimens and 08 specimens of new reptile species of genus *Mediodactylus*.
- Carried on with the sorting and cataloguing of the invertebrate collection brought from Zoological Survey Department to PMNH. Sorted and catalogued 200 jars and 9974 specimens.
- Carried on with the sorting and cataloguing of the invertebrate collection brought from Zoological Survey Department to PMNH. Sorted and catalogued 760 jars and 30,421 specimens.
- Rearranged marine invertebrate collection and classified 604 jars containing 10,000 specimens.
- Cataloged 230 specimens of different insect orders/ families/subfamilies/genus.

1.3.3 National Collaborative Projects/Reports

- Biodiversity of Wetlands of Pakistan (Pakistan Wetland Project, WWF-Pakistan)
- Environmental Impact Assessment in Best Management Practices Cotton fields at Sukkur, Ghotki and Bahawalpur. (Pakistan Sustainable Cotton Initiatives and World Wide Fund for Nature Pakistan).
- Collaborative research programme with Hagler Bailly- Pakistan on the Ecology and Biodiversity of various areas of Pakistan.
- Prepared and submitted 20 baseline study reports to WWF. Pakistan Wetlands Programme and Hagler Bailly-Pakistan, under collaborative programmes with these organizations.

1.3.4 National Research Projects and Reports

- Continued PSF funded research project on Studies on algae of major rivers of Punjab (Pakistan) with special emphasis on its consumption by economically important fishes.

1.3.5 Publications

- Feroze A., Malik S.A. and Kilpatrick W. C. 2010. Phylogenetic relationships of medically important vipers of Pakistan inferred from Cytochrome *b* sequences. *Journ. Animal & Plant Sciences*, 20(3): 147-157.

- Nadeem, M.S. Mahmood, T., Asif, M, and. Hassan, M.M., (2011): Annual Reproductive Success of the Hoopoe Lark *Alaemon alaudipes* in Nag Valley (1999-2001), Kharan. Pakistan. Pakistan Journal of Zoology, vol. 43 (2), pp. 279-284, 2011.
- Masroor, R. 2011. The Bronze-back tree snake, *Dendrelaphis tristis* (Daudin, 1803): an addition to the herpetofauna of Pakistan. Accepted in Pakistan Jour. Zool.
- Mahmood, K.& Mishkat Ullah. 2011. Addition to the knowledge of Taxonomy and Biology of *Arge simlaensis* (Cameron) (Argidae: Hymenoptera) in rainfed Conditions of Punjab. Pakistan Journal of Zoology 43(4), pp.821-823.
- Mahmood, K., Jeno Papp, J.& Donald L.J. Quicke. 2011. A new Afrotropical genus *Doggerella* gen. nov. of braconine wasp (Hymenoptera: Braconidae) with twelve new species. *Zootaxa* 2927: 1–37.
<http://www.mapress.com/zootaxa/2011/f/z02927p037f.pdf>

1.3.6 Seminars/Symposia/Trainings/Workshops Organized

A 3 days` National Symposium on Biodiversity of Pakistan 2011 was organized by PMNH, PSF, Ministry of Science and Technology with the support of WWF, Snow Leopard Trust and COMSATS from 7th-9th June 2011. During the symposium, 160 biologists from across the country presented 84 thought provoking research papers and discussed various biodiversity related issues, threats and their remedies. In the final session the participants of the symposium presented their recommendations which would be included in the proceedings of the symposium as a book on “Biodiversity of Pakistan, Volume-II”.

1.3.7 Seminars/Trainings/Workshops Attended

- Director ZSD, attended a symposium on “Conservation of Fisheries Resources of Chashma Barrage”, organized by Punjab Fisheries Department at Chashma Barrage on 14th June 2011.
- Four officers participated in Training of Master Facilitators for Traveling Expo Biodiversity is Life, organized by PSF, French Embassy and Scientific, Technical, Industrial and Cultural Centre (CCSTI), France.
- One officer completed four days training entitled “Case Study Methods” on 21st -24th June 2011 at Pakistan Planning and Management Institute, Islamabad.

1.3.8 MoUs Signed/Prepared

- A MoU was signed between Hagler Bailly- Pakistan (HBP) and PMNH which aims to establish collaboration between the two organizations for the survey of biodiversity of various areas of Pakistan
- Zoological Sciences Division, PMNH, has prepared and submitted to PSF the draft of the MoUs to be signed between Snow Leopard Trust and PMNH for future collaborative ecological and wildlife studies.

1.3.9 Services Rendered to other Organizations

- A scientist of ZSD has been selected as editorial board member of “Hamadryad”, a biannual journal of the Madras Crocodile Bank Trust and Centre for Herpetology.
- Supervised Ph. D. thesis research of 2 students of Quaid-e-Azam University.
- Reviewed 3 research articles for African Journal of Biotechnology.
- In connection with the in-house lecture series, PMNH invited guest speakers of the Hunza valley who delivered lectures on the efforts of the inhabitants of the area for the conservation of the Snow Leopard. A documentary on a Snow Leopard captured by these people, its stay in captivity and ultimate release in its wild habitat was also shown.

1.3.10 Higher Studies

- Dr. Ahsan Feroze Research Associate. ZSD has been awarded Ph. D. degree in Biology from the Department of Biology, Quaid -e-Azam University, Islamabad.

1.4 Public Sciences Division

1.4.1 Visits to PMNH

- Secretary Ministry of Science & Technology Mr. Irfan Nadeem Sayeed visited PMNH January 7, 2011. He visited display galleries and natural history repositories of PMNH. He appreciated PMNH scientists’ efforts on natural history specimen collection, research and their display.
- The families of Pak France Alumni Network (PFAN) members visited PMNH on January 10, 2011. The delegation visited different galleries of the museum and took keen interest in various displays. They appreciated the educational and research activities of PMNH.
- Vice Chancellor of Khairpur University, Sindh, Professor Dr. Nilofar Sheikh, visited PMNH in February. She discussed the possibilities to establish research collaboration between the university and PMNH.
- Secretary General, ECO H.E. Mr. Mohammad Yahya P. Maroofi, along with his delegation, visited PMNH on 2nd March, 2011 and took keen interest in the activities performed by the PMNH.
- Mr. Pervez Butt, former Secretary of Ministry of Science and Technology (MoST) visited PMNH on March 10, 2011.
- Mr. Zafar Ullah Baloch, Secretary, Live Stock, Balochistan, visited PMNH on April 2, 2011. He visited the display galleries and laboratories of PMNH. He also held a meeting with BS-19 and above officers of PMNH to explore the avenues of cooperation between PMNH and Balochistan Live Stock departments.
- A group of 40 students and 10 teachers from Global Children Network (CGN), Pakistan, visited PMNH on July 18, 2010. The visit was a part of exchange programme for the students of public schools in collaboration with FATA Secretariat.
- Thirty participants of a 4-week Master Teachers Trainer Training Programme were guided through the Display Galleries of PMNH in July, 2010. The participants of the programme included teachers from AJK, FATA, Gilgit-Baltistan and Islamabad Capital Territory.

- Students from Adventure Foundation, Peshawar University, The Educators, National College of Arts Rawalpindi Campus, Cambridge School Islamabad, Government College Jhelum, Al-Huda International School, FG College for Women F7/4 Islamabad, Holy Family Hospital Rawalpindi and University of AJK, Muzaffarabad visited PMNH.
- The participants of 11th Mid Career Management Course, National Institute of Management (NIM), Quetta, visited PMNH on April 30, 2011 as a part of their In Land Study Tour. PMNH scientists briefed the visiting officers about the museum functions, achievements and future plans.
- The participants of two-day Science Media Forum “Where Science and Media Meet” organized by PSF visited PMNH on May 29, 2011 to get firsthand information about the museum functions and achievements. A documentary on Biodiversity issues was screened for the guests

1.4.2 Public Education on Media

- Recorded interviews for Voice of America Urdu Service about the role of PMNH in enhancing awareness about the natural resources of the country.
- Director General, PMNH appeared in an interview for Dunya TV Live on the occasion of International Day of Butterflies. In the interview he highlighted the important role of butterflies in Biodiversity.
- Director General, PMNH elaborated the role of PMNH in enhancing public awareness on the importance of biodiversity of Pakistan and its conservation an interview for Samaa TV.
- Islamabad Dateline published a news article on PMNH on 4th March 2011. In this article information about the establishment of museum, exhibited specimens, dioramas and research activities of PMNH were given.

1.4.3 Number of Visitors to Display Galleries

- About 9000 persons visited the PMNH Display Galleries, which included about 65% students and 45% general public, including about 30 foreigners.

1.4.4 Seminars/Symposia/Trainings/Workshops Organized

- A 2 days Female Teachers Training workshop was been organized by PMNH from 10th May 2011 to 11th May 2011, on the occasion of National Women year and to celebrate International Biodiversity Day. More than 200 female teachers participated from the different schools of Islamabad and Rawalpindi region. Photography training was imparted on the second day.

1.4.5 Seminars/Trainings/Workshops Attended

- Participated in 1 day Teachers Training workshop organized by Gujranwala Arts Council. A documentary on *Baluchitherium* was shown. An exhibition on the fossils of Pakistan was also arranged in the GAC art gallery.

1.4.6 Services Rendered to other Organizations

PMNH arranged film shows on natural history during the visit of various groups of students to PMNH.

2.0 INTERNATIONAL LIAISON

- Director General, PMNH, participated in the at Asia Science Educators' Academy (ASEA) held on August 2-6, 2010 at Seoul and Daejeon, South Korea.
- Director, PSD attended a 4-day International Workshop on "Science Centres in Promoting a Knowledge and Innovative Society for Sustained and Responsible Growth in Developing Countries" at Kula Lumpur, Malaysia from Oct. 11-14, 2010.
- Curator, ZSD, attended "GBIF Governing Board Meeting" held in Suwon, South Korea on 13-15th October.

3.0 PLANNING AND DEVELOPMENT

Work was initiated by various Divisions at PMNH in order to develop new PC-Is and revision of previous ones remained in progress during the reporting period.

**III. PAKISTAN SCIENTIFIC AND TECHNOLOGICAL
INFORMATION CENTRE (PASTIC)**

Pakistan Scientific and Technological Information Centre (PASTIC) is the premier organization in the field of S & T information dissemination that serves as a gateway for access to and delivery of S&T information catering to the needs of researchers. It is one of the few public sector organizations which acquired ISO: 9001: 2000 Certification. Users of PASTIC services include researchers, entrepreneurs, academicians, scientists, engineers, industrialists, policy makers and planners. Its sanctioned strength is 163 including Technical and Administrative Staff.

PASTIC National Centre is housed in its own building at Quaid-e-Azam University Campus, Islamabad with comprehensive collection of publications in various fields of Science and Technology. It has six Sub-Centres working at Karachi, Lahore, Peshawar, Quetta, Faisalabad and Muzaffarabad.

PASTIC acquires, processes and disseminates information in all disciplines of Science and Technology. It develops inter-library cooperation for sharing resources, and establishes and maintains links with international/regional information networks/agencies. PASTIC provides training to information professionals in modern information handling and management techniques. Collaboration with different organizations and agencies enhances the scope of PASTIC information services that are offered to clients and help in responding to the diverse needs of a broad community of users. The regular activities/services of PASTIC include; Document Supply, Bibliographic Information, Abstracting and Indexing, Technology Information, Patent Information, Reprography and International Liaison.

1.0 Aims and Objectives

- To acquire, process and disseminate scientific and technological information to the researchers.
- To provide bibliographic information service and document supply service.
- To interact with regional and international S&T information agencies/networks.
- To develop inter-library cooperation, resource sharing at national level.
- To train information personnel in contemporary techniques and methods of information handling.
- To develop and strengthen the National Science Reference Library.
- To compile and publish reference information publications.

2.0 Activities and Services

PASTIC is a multidisciplinary national S&T information centre and its services and activities are aimed at fulfilling needs of its users by providing the latest information in all fields of Science & Technology. The information services provided by PASTIC are vital for undertaking research and development initiatives for socio-economic uplift of the country. The activities undertaken during the report period are briefly described below:

2.1 Document Procurement and Supply Service

Under the Document Procurement and Supply Service, requests were received from different R&D organizations for supply of reprints of research articles, conference papers and reports, etc. In order to fulfill the demand of clients' reprints of 699 articles were procured either from local sources or from abroad, and supplied to 209 researchers (Table 2). Major user organizations include Quaid-i-Azam University, Islamabad, Pir Mehar Ali Shah-Arid Agriculture University, Rawalpindi, Azad Jammu and Kashmir University, Muzaffarabad, Dr. A.Q. Khan Research Labs, Pakistan Institute of Engineering & Applied Sciences, National University of Science & Technology, Islamabad, Fatima Jinnah Women University, Rawalpindi, Kohat University of Science & Technology, Kohat. International Islamic University, Islamabad. Allama Iqbal Open University, Islamabad, PCSIR Labs, NIAB, Faisalabad, Pakistan Meteorological Department, Islamabad, University of Punjab, Lahore, University of Balochistan, Quetta. HEJ Research Institute of Chemistry, University of Karachi, Karachi and University of Agriculture, Faisalabad. The Union Catalogue of the S&T libraries of Pakistan compiled by PASTIC was mainly used for locating the literature available in local libraries. The major local sources and libraries contacted for cooperation and sharing their resources in providing literature included;

1. Quaid-i-Azam University, Islamabad
2. PCSIR Laboratories, Lahore
3. PCSIR Laboratories, Karachi
4. National Institute of Health, Islamabad
5. PINSTECH, Islamabad
6. University of Peshawar, Peshawar
7. University of Karachi, Karachi
8. NED University of Engineering & Technology, Karachi
9. HEJ Research Institute of Chemistry, Karachi
10. University of the Punjab, Lahore
11. Aga Khan University, Karachi

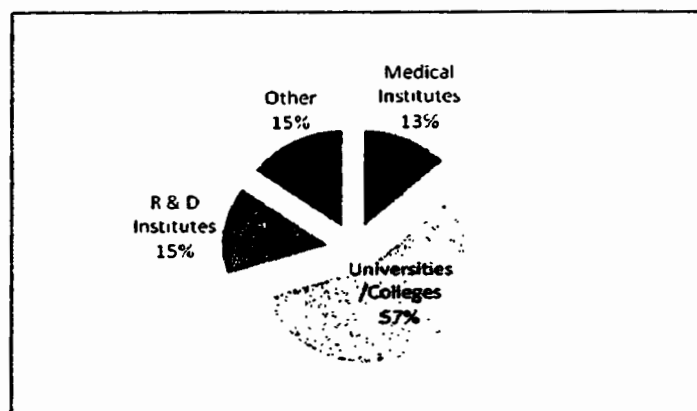
12. University of Agriculture, Faisalabad
13. National Agricultural Research Centre, Islamabad
14. Higher Education Commission, Islamabad
15. Pakistan Forest Institute, Peshawar
16. College of Physicians & Surgeons Pakistan, Karachi
17. NIBGE, Faisalabad
18. Kahuta Research Laboratories, Rawalpindi
19. KPK Agricultural University, Peshawar
20. University of Engineering & Technology, Lahore.
21. Pakistan Institute of Medical Sciences, Islamabad.
22. Pakistan Medical Research Council, Islamabad.
23. Pakistan Agriculture Research Council, Islamabad.

For foreign procurement of articles mainly British Council Library is used for supply of documents to the end-users. Major breakup of the types of user organizations is given below.

Sr. No.	Name of Centre	No. of Users	No. of References Supplied
1.	PNC [*] , Islamabad	1,642	248,504
2.	PSC ^{**} , Karachi	57	55,563
3.	PSC, Lahore	655	124,604
4.	PSC, Faisalabad	1,008	146,805
5.	PSC, Peshawar	413	23,487
6.	PSC, Muzaffarabad	342	56,376
7.	PSC, Quetta	126	623

*PNC = PASTIC National Centre

**PSC = PASTIC Sub-Centre



Breakup of the user organizations benefiting information service

2.2 Bibliographic Information Service/Literature Search

PASTIC has access to international online and offline S&T databases. Literature search is carried out for searching abstracts/references from these databases and supplied to users according to their research topics on request. A total of 6,55,962 abstracts/references on various S&T topics were supplied to 4243 research workers and other users during the period under review (Table 3). Following databases were used for this literature research/ Bibliographic Information Service.

1. Medline (Health & Medicine)
2. Life Science (Biology)
3. Poltox (Pollution & Toxicology)
4. Wilson Applied Science & Technology (Applied Sciences & Engineering)
5. Derwent Biotech. Abstracts (Biotechnology)
6. Proquest (Full text) (Physics)
7. INSPEC (Physics)
8. Sociological Abstracts (Sociology)
9. Sociofile (Sociology)
10. Science Citation Index
11. Compendex Site Enhance (Engineering & Technology)
12. Ulrich's International Periodical Directory
13. CSA Pollution Abstract Online (Environmental Pollution)
14. Current Contents: Physical, Chemical & Earth Sciences

For further strengthening of the bibliographic information service and resources of PASTIC and its Sub-Centres, subscription of following online bibliographic databases was renewed / newly purchased.

1. Current Contents: Physical, Chemical & Earth Sciences (On Line)
2. CSA: Toxline (On Line)
3. Wilson Applied Sciences & Technology Abstracts full text (On Line)
4. Biological & Agricultural Index Plus (On Line)
5. International Pharmaceutical Abstracts (On Line)
6. New Technologies & Engineering (On Line)
7. Aquaculture Abstracts (On Line)

Centre-wise Document Supply Service for the year 2010-11

Sr. No.	Name of Centre	No. of Users	No. of Documents Supplied
1.	PNC*, Islamabad	43	124
2.	PSC**, Karachi	57	345
3.	PSC, Lahore	19	48
4.	PSC, Faisalabad	16	45
5.	PSC, Peshawar	8	20
6.	PSC, Muzaffarabad	63	114
7.	PSC, Quetta	3	3

*PNC = PASTIC National Centre

**PSC = PASTIC Sub-Centre

2.3 Abstracting and Indexing Service

PASTIC provides abstracting and indexing service by publishing an abstracting journal entitled "Pakistan Science Abstracts" in ten different scientific disciplines. which serves as a secondary information source to give support to research and development activities in the country. The scientific information generated in Pakistan or abroad and published in Pakistani S&T journals is documented in the form of abstracts along with detailed author index and keyword index in this secondary journal.

All processing for compilation such as data collection, scanning, typing, formatting, indexing, composing, dummy preparation, proof reading and editing of ten issues of Pakistan Science Abstracts (PSAs) of 2010 was carried out and completed. PSAs in following ten disciplines were published during the year 2010-11.

- Agricultural Sciences, 2010, Vol.48-A
- Animal Sciences, 2010, Vol.48-D
- Biochemistry & Biotechnology, 2010, Vol.48-B
- Chemical & Pharmaceutical Sciences, 2010, Vol.48-C
- Earth & Environmental Sciences, 2010, Vol.48-E
- Information Communication & Engineering Sciences, 2010, Vol.48-I
- Mathematics & Statistics, 2010, Vol.48-G
- Medical Sciences, 2010, Vol.48-H
- Physics, 2008, Vol.46-F, 2010, Vol.48-F
- Plant Sciences, 2010, Vol.48-J

All these PSAs were distributed among S&T and R&D organizations and academic institutions as part of information dissemination activities. These subject wise PSAs have proved to be quite useful for diverse nature of users.

2.4 Technology Information Service

Technology Information Section renders its services in information provision to R&D Workers, Engineers, Entrepreneurs, SMEs and the Industrialists. The aim is to enhance growth, potential and competitiveness among SMEs at national and international level, build effective coordination between R&D Sector and Industry for enhancing innovations, competitiveness & promotion of indigenous technologies. This section also organizes Technology based exhibitions and seminars to promote Science & Technology. Under this service, following activities were carried out.

- A series of four University-Industry Partnership Symposia on “Building Effective Coordination between R&D and Industry for Enhancing Innovation Competitiveness and Productivity of Indigenous Technologies” were organized at Chambers of Commerce and Industry in Lahore, Rawalpindi, Faisalabad and Peshawar. Four Poster Exhibitions on Innovative R&D Projects were arranged under University-Industry Partnership programme to encourage young university researchers for the innovative research, new products and services at Chambers of Commerce & Industry in Lahore, Rawalpindi, Faisalabad and Peshawar.
- A Seminar and Exhibition on “Promoting University Industry Partnership in Food & Agriculture-the Way Forward” was organized at Lahore Chamber of Commerce & Industry on 31st May, 2011.
- A seminar on “Indigenous Commercialization Potential of Academic Research” was organized at Karachi Chamber of Commerce and Industry on 27th June, 2011.
- A two days workshop on “Project Management” was organized at Rawalpindi Chamber of Commerce and Industry from 6-7 July, 2010.
- A bimonthly Trade and Technology news bulletin entitled “Technology Roundup” was regularly published and six issues of this news bulletin were brought out online.

2.5 Research & Industrial Linkages and Information Resource Sharing

Research & industry linkages are necessary for bringing together academia and industry for close relation between research objectives and industry priorities and promoting indigenous technologies. In this regard, PASTIC signed a MoU with Lahore Chamber of Commerce & Industry (LCCI), Lahore. PASTIC is also in process of developing linkage with other science information centres for strengthening its information resources and accessing all global information resources. In this regard, PASTIC signed another MoU with Latif Ebrahim Jamal (LEJ) National Science Information Center, HEJ Research Institute of Chemistry, University

of Karachi, Karachi. These MoUs will go a long way in sharing information resources, developing industrial research culture and empowering the industrial sector with innovations leading to the promotion of competitiveness, productivity and socio-economic development.

2.6 PASTIC National Science Reference Library

PASTIC National Science Reference Library is aimed at providing reference and referral services to the users and strengthening of all the services of PASTIC particularly Document Supply service, Bibliographic Information service, Abstracting and Indexing service, Technological Information service, etc. In this context, strengthening of library resources, acquisition of published library material and library automation activity remained in progress. PASTIC library has built up a collection of more than 8,700 books on natural & applied sciences, over 1550 titles of national & international S&T journals and 9000 miscellaneous documents and reports.



During 2010-11, about 864 users/researchers visited PASTIC Library for reference purpose, reading and photocopying services. Besides, library received 382 issues of different national and international journals. In addition, 117 books, 48 reports, miscellaneous documents were acquired, processed and shelved for use. A book exhibition

was arranged by PASTIC Library at PASTIC for providing a platform to Book Industry, readers and scientific community for interaction among each others and disseminating documented knowledge. Besides, a free internet service for students was initiated by the Library. Library bulletin of fresh arrivals was regularly published on monthly basis during the period under review and distributed among relevant circles.

2.7 PASTIC Information Service Stalls

PASTIC arranged 45 Service Stalls in Islamabad, Lahore, Faisalabad, Bahawalpur, Karachi, Quetta, Muzaffarabad (AJK) and Peshawar at various departments of different Universities and R&D Institutions on different occasions. The aim of organizing these service stalls was to provide



S&T information services at the doorstep of the Universities and other institutions to facilitate faculty members, researchers and R&D workers. Detail of these Stalls is given below.

KARACHI

Sr.#	Date	Venue
1.	11-08-2010	Dr. Mehmud Hussain Library, University of Karachi, Karachi.
2.	24-08-2010	Faculty of Pharmacy, University of Karachi, Karachi.
3.	10-10-2010	Baqai Dental College, Baqai Medical University, Karachi
4.	10-11-2010	Basic Medical Sciences Institute, JPMC, Karachi
5.	11-11-2010	Department of Physiology, Baqai Medical University, Karachi
6.	08-12-2010	Baqai Institute of Pharmaceutical Sciences, Baqai Medical University, Karachi
7.	13-01-2011	LEJ National Science Information Centre, Karachi
8.	17-02-2011	Department of Chemistry, University of Karachi, Karachi
9.	03-03-2011	Department of Psychology, University of Karachi, Karachi
10.	12-05-2011	Peoples University of Medical & Health Sciences for Women, Shaheed Benazirabad.
11.	25-06-2011	ISRA University, Hyderabad

FAISALABAD & BAHAWALPUR

Sr.#	Date	Venue
12.	04-08-2010	University of Agriculture Faisalabad
13.	19-10-2010	Faculty of Agriculture, University of Agriculture, Faisalabad
14.	20-10-2010	Faculty of Sciences, University of Agriculture, Faisalabad
15.	03-01-2011	Basic Science Block, Government College University, Faisalabad.
16.	07-03-2011	National Institute of Biotechnology & Genetic Engineering (NIBGE), Faisalabad
17.	13-20 2011	University of Agriculture Faisalabad during Golden Jubilee Celebration of University of Agriculture, Faisalabad
18.	14-04-2011	Ayub Agriculture Research Institute (AARI), Faisalabad
19.	03-05-2011	Faculty of Agriculture University of Agriculture, Faisalabad
20.	04-05-2011	Faculty of Agri. Engineering, University of Agriculture, Faisalabad
21.	05-05-2011	Faculty of Veterinary Sciences , University of Agriculture, Faisalabad
22.	2-3 June, 2011	Faculty of Sciences, The Islamia University, Bahawalpur

LAHORE

Sr.#	Date	Venue
23.	10-10-2010	University of the Punjab, Lahore
24.	13-12-2010	PCSIR Laboratories, Ferozpur Road, Lahore
25.	14-01-2011	Government College University, Lahore
26.	22-24 Feb, 2011	Government College University, Lahore
27.	28-02-2011	Lahore University, Raiwind Road, Lahore.
28.	4-03-2011	Lahore University, Raiwind Road, Lahore.
29.	02-04-2011	Beacon House University, Lahore
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28.	4-03-2011	Lahore University, Raiwind Road, Lahore.
29.	02-04-2011	Beacon House University, Lahore
30.	26-04-2011	Lahore University, Raiwind Road, Lahore.

QUETTA

Sr.#	Date	Venue
31.	10-10-2010	Balochistan University of Information Technology, Engineering & Management Sciences (BUIITEMS), Takatu Campus, Quetta
32.	20-10-2010	Agriculture College, Baleli, Quetta
33.	28-03-2011	University of Balochistan, Quetta
34.	29-03-2011	Balochistan University of Information Technology, Engineering & Management Sciences (BUIITEMS), Takatu Campus, Quetta

AZAD JAMMU & KASHMIR

Sr.#	Date	Venue
35.	10-10-2010	University of Azad Jammu & Kashmir, Muzaffarabad.
36.	20-10-2010	University of Azad Jammu & Kashmir, Muzaffarabad.
37.	18-04-2011	University of Azad Jammu & Kashmir, Muzaffarabad.

PESHAWAR

Sr.#	Date	Venue
38.	06-04-2011	Islamia College Chartered University, Peshawar.
39.	20-21 April, 2011	Centre for Disaster Management, University of Peshawar, Peshawar
40.	27-04-2011	Gomal University, D.I. Khan
41.	05-06-2011	PCSIR Laboratories, Jamrud Road, Peshawar

ISLAMABAD

Sr.#	Date	Venue
42.	24-09-2010	Quaid-e-Azam University Campus, Islamabad
43.	2-10-2010	International Islamic University, Islamabad
44.	10-10-2010	Fatima Jinnah Women University, Rawalpindi
45.	21-25.01.2011	Jinnah Convention Centre, Islamabad
46.	14-15.03.2011	Quaid-e-Azam University, Islamabad
47.	22-4-2011	National Book Foundation, Islamabad
48.	7-9.06.2011	Margalla Motel, Islamabad

2.8 Reprographic Service

The Reprographic Section of PASTIC has facilities ranging from photocopying to offset printing for its own printing requirements and for providing printing services to other S&T organizations. During the report period, about 95 printing jobs were carried out for 09 R&D organizations. PASTIC is also in the process of strengthening its Reprographic Services (Printing Press) through a development project entitled "Strengthening and Enhancement of the Reprographic Services of PASTIC". The main objective of the project is enhancing the printing quality and capability of PASTIC press by introducing state of the art new machinery

and equipment. In this regard, a Gum Binding Machine & a paper folding machine were purchased after completing all codal formalities and installed in the Reprographic Unit. These newly purchased and installed machines will be helpful in enhancing the printing quality and capability of PASTIC press.

3.0 INTERNATIONAL LIAISON

PASTIC is the National Focal Point of some Regional/International Information Centres and Networks viz. SAARC Documentation Centre, WHO/CEHANET, IFAP and National distributor for UNESCO developed library management software WINISIS and IDAMS. The following collaborative activities were carried out during the year 2010-11.

3.1 Distribution of UNESCO Software

PASTIC in its capacity of authorized distributor of UNESCO developed software namely WINISIS & IDAMS is responsible for distribution of this software in Pakistan. PASTIC also provides training on WINISIS package which is used for library management and development of bibliographic databases. During the year, WINISIS Package was provided to 78 individual library & information professionals and librarians of 23 organizations for computerization of their libraries. Besides, two workshops were organized for providing training on this WINISIS package in Karachi and Quetta.

3.2 Collaboration with SAARC Documentation Centre (SDC)

SDC is a regional centre of SAARC established in 1994 at New Delhi, India to act as an effective information system of Member States to enable them to exchange information in various fields of S&T. Another objective of SDC is to develop human resource in the Member States in the area of information science, technology, management systems and services. In this regard, following activities were undertaken during the period under review:

- Twenty Three different titles of research and abstracting journals of 2010 covering major disciplines of science and technology being published by National Institute of Science Communication and Information Resources (NISCAIR) were received free of cost.
- Four officers of PASTIC, Ministry of Science & Technology and Pakistan Council of Science & Technology were sent for training under SDC training opportunities. One officer of PASTIC availed one year training opportunity in Information Technology for Information Management. Another officer of PASTIC availed three months training related to documentation. One officer of Ministry of Science & Technology availed five weeks training and one officer of Pakistan Council of Science &

Technology availed one week training in information communication & documentation.

3.3 Bilateral Cooperation

- S&T Cooperation proposals were prepared for bilateral cooperation in the field of Information Exchange with Thailand, Italy, Egypt, and China.
- An outline of proposal on “SAARC Seminar on Information Security” for 5th meeting of the SAARC Technical Committee on Science & Technology was prepared.
- Concept proposal for 17th S&T protocol between PASTIC and ISTIC, China was prepared.
- Brief for the 14th Annual Session of the United Nations Commission on Science & Technology for Development (CSTD) was prepared.

4.0 HUMAN RESOURCE DEVELOPMENT

4.1 Trainings/Workshops/Seminars Organized

Another important activity of PASTIC is to impart training to information professionals on computer applications for library automation and information management as well as organization of workshops and seminars on related diverse topics. In this regard, following training workshops/seminars were organized;

- Two days workshop on “Project Management” at Rawalpindi Chamber of Commerce and Industry (RCCI), Rawalpindi from 6-7 July, 2010 in collaboration with Institute of Research Promotion (IRP), Lahore and RCCI, Rawalpindi.
- One week training workshop on “Corel Draw/Graphic Designing” from 27th October – 3rd November, 2010 at PASTIC, Islamabad.
- An Awareness Seminar at Pakistan Institute of Medical Sciences (PIMS) on October 29, 2010. The objective of seminar was to create awareness about the services and information facilities/resources of PASTIC. 98 Doctors and Postgraduate Students of PIMS participated in the Seminar.
- PASTIC Services Awareness Seminar at Baqai Dental College, Karachi on October 29, 2010.
- Symposium on “Building Effective Coordination between R&D and Industry for enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies” on October 30, 2011 at Lahore Chamber of Commerce and Industry (LCCI), Lahore.
- PASTIC Services Awareness Seminar at Basic Medical Sciences Institute, Jinnah Postgraduate Medical Centre, Karachi on November 10, 2010.
- PASTIC Services Awareness Seminar at Department of Physiology and Oncology, Baqai Medical University, Karachi on November 11, 2010.
- PASTIC Services Awareness Seminar at Pakistan Forest Institute, Peshawar on December 22, 2010.
- Symposium on “Building Effective Coordination between R&D and Industry for enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies”

- on January 4, 2011 at Rawalpindi Chamber of Commerce & Industry (RCCI), Rawalpindi.
- PASTIC Services Awareness Seminar at Baqai Institute of Pharmaceutical Sciences, Karachi on January 8, 2011.
 - PASTIC Services Awareness Seminar at CECOS University, Peshawar on 8.01. 2011.
 - Symposium on “Building Effective Coordination between R&D and Industry for enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies” on February 12, 2011, at Faisalabad Chamber of Commerce & Industry (FCCI), Faisalabad.
 - Symposium on “Building Effective Coordination between R&D and Industry for enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies” on March 10, 2011, at Khyber Pakhtoonkhwa Chamber of Commerce and Industry, Peshawar.
 - PASTIC Services Awareness Seminar at University of Balochistan, Quetta on March 30, 2011.
 - PASTIC Services Awareness Seminar at Balochistan University of Information Technology, Engineering and Management Sciences, Quetta on April 1, 2011.
 - Workshop on “Library and Information Management” at Department of Library and Information Science, University of Karachi, Karachi from 19-21 April, 2011.
 - Seminar on “Empowering Women Entrepreneurs-Exploring Opportunities and Avenues” at Quetta on April 23, 2011.
 - Services Awareness Seminar at Gomal University, D.I. Khan on April 27, 2011.
 - Workshop on “Library and Information Management” at University of Balochistan, Quetta from 3-5 May, 2011.
 - PASTIC services awareness seminar entitled “PASTIC S&T Information Services and Use of PASTIC S&T Database Library” at University of Azad Jammu & Kashmir, New Campus, Muzaffarabad on May 3, 2011.
 - Seminar on “Access to Global Information Resources Through PASTIC S&T Information Services” at University of Gujrat, Gujrat on May 23, 2011.
 - Seminar on “Access to Global Information Resources Through PASTIC S&T Information Services” at Quaid-e-Azam University, Islamabad on May 24, 2011.
 - Services Awareness Seminar at Islamia University, Bahawalpur on June 3, 2011.
 - National Information Security Seminar at Islamabad from 6-7 June, 2011.
 - Seminar on “Access to Global Information Resources Through PASTIC S&T Information Services” at Pir Mehr Ali Shah Arid Agriculture University, Rawalpindi on June 18, 2011.
 - Services Awareness Seminar at ISRA University, Hyderabad on June 25, 2011.
 - Seminar on “Indigenous Commercialization Potential of Academic Research” at Karachi Chamber of Commerce & Industry (KCCI), Karachi on June 27, 2011.
 - Five Internees from National University of Science & Technology (NUST) were provided with the facility of Internship and training in the area of Information Technology by PASTIC for the period of three months from July-September, 2010.

4.2 Lectures/Presentations Delivered

1. Mrs. Kausar Sohail Sr. Scientific Information Officer delivered presentation on "PASTIC Information Resources and Services" in PASTIC Awareness Seminars at PIMS, Islamabad, University of Gujrat, Gujrat and PMAS Arid Agriculture University, Rawalpindi.
2. Mr. Saifullah Azim, Sr. System Analyst delivered presentation on "Advance Web Searching Techniques" in PASTIC Awareness Seminar at PIMS, Islamabad, University of Gujrat, Gujrat and University of Azad Jammu and Kashmir, Muzaffarabad.
3. Mr. Saifullah Azim, Sr. System Analyst conducted a training course on "e-Government Development" organized by Pakistan Manpower Institute (PMI) from January 10-15, 2011 at PMI, Islamabad.
4. Mr. Saifullah Azim, Sr. System Analyst delivered a lecture on "Role of Information Technology for Educational Planning" in the Seminar at Pakistan Manpower Institute (PMI) on January 26, 2011.

4.3 Meetings/Workshops/Trainings Attended

- Deputy Director, PASTIC Sub Centre, Lahore attended following trainings/seminars and workshops:
 - (i) One day hands on training workshop on "Citation and Referencing in Research" at Lahore University, Raiwind Road, Lahore on February 28, 2011.
 - (ii) One day workshop on Managing "Plagiarism in Academic Research" at Lahore University, Raiwind Road, Lahore on March 4, 2011.
 - (iii) One day workshop on "Publishing your Research" at Beacon House University, Canal Bank Road, Lahore on April 2, 2011.
 - (iv) One day seminar on "Effective Linkage between R&D and its impacts on National Economy" at PCSIR Laboratories Complex, Lahore on April 30, 2011.
- Mrs. Kausar Sohail Sr. Scientific Information Officer, Mr. Muhammad Ayub Dogar, Sr. Scientific Information Officer and Mr. Mehmood Ahmed, Assistant attended training course on "Latest Trends in Library Management" at AHK National Centre for Rural Development, Islamabad from 8-12 November, 2010.
- Ms. Nageen Ainuddin, Director, Mrs. Kausar Sohail Sr. Scientific Information Officer, Mr. Muhammad Ayub Dogar, Sr. Scientific Information Officer attended "3rd National IPR Conference" on 26th April, 2011 on occasion of world IP day at Islamabad.
- Mr. Muhammad Hasnain, Assistant Director (STI) attended following trainings/seminars and workshops:
 - (i) One day international seminar on "Drug Addiction and Risks related to HIV & AIDS" on 4th February, 2011 at University of Agriculture, Faisalabad.
 - (ii) One day workshop on "Linking Biodiversity & Food Security", on 17th February, 2011 at University of Agriculture, Faisalabad.

- (iii) One day workshop on “Advance Searching skills, Research Ethics and Citation Management by using End Note” on 23rd February, 2011 at National Textile University, Faisalabad.

5.0 Other Activities

Annual Review Meeting of the officers of PASTIC National Centre and its Sub Centres was held at PASTIC Headquarter in Islamabad. The purpose of this meeting was to review the activities carried out at PASTIC National Centre and its Sub Centres and to discuss the plans for next year. The meeting proved very useful in exchanging ideas for improving the existing activities and initiating new activities for enhancing, improving and strengthening the services of PASTIC. The collection of data for updating the In-House databases was undertaken and the activity of updating the database of Union Catalogue of Scientific Periodicals of Libraries of Pakistan and Directory of Scientific Periodicals of Pakistan remained in progress.

Besides, website of PASTIC was re-designed and upgraded. New software applications were developed & wireless internet service was initiated at PASTIC National Science Reference Library. Renovation work of PASTIC building was also carried out. PASTIC National Centre and its all Sub Centres celebrated World Science Day for Peace and Development (WSDPD) by organizing various activities. Different delegates of students and teachers from Islamia University, Bahawalpur and Quaid-e-Azam University, Islamabad visited PASTIC at different times during the report period and were briefed about services provided by the PASTIC.

IV. ORGANIZATION AND ADMINISTRATION

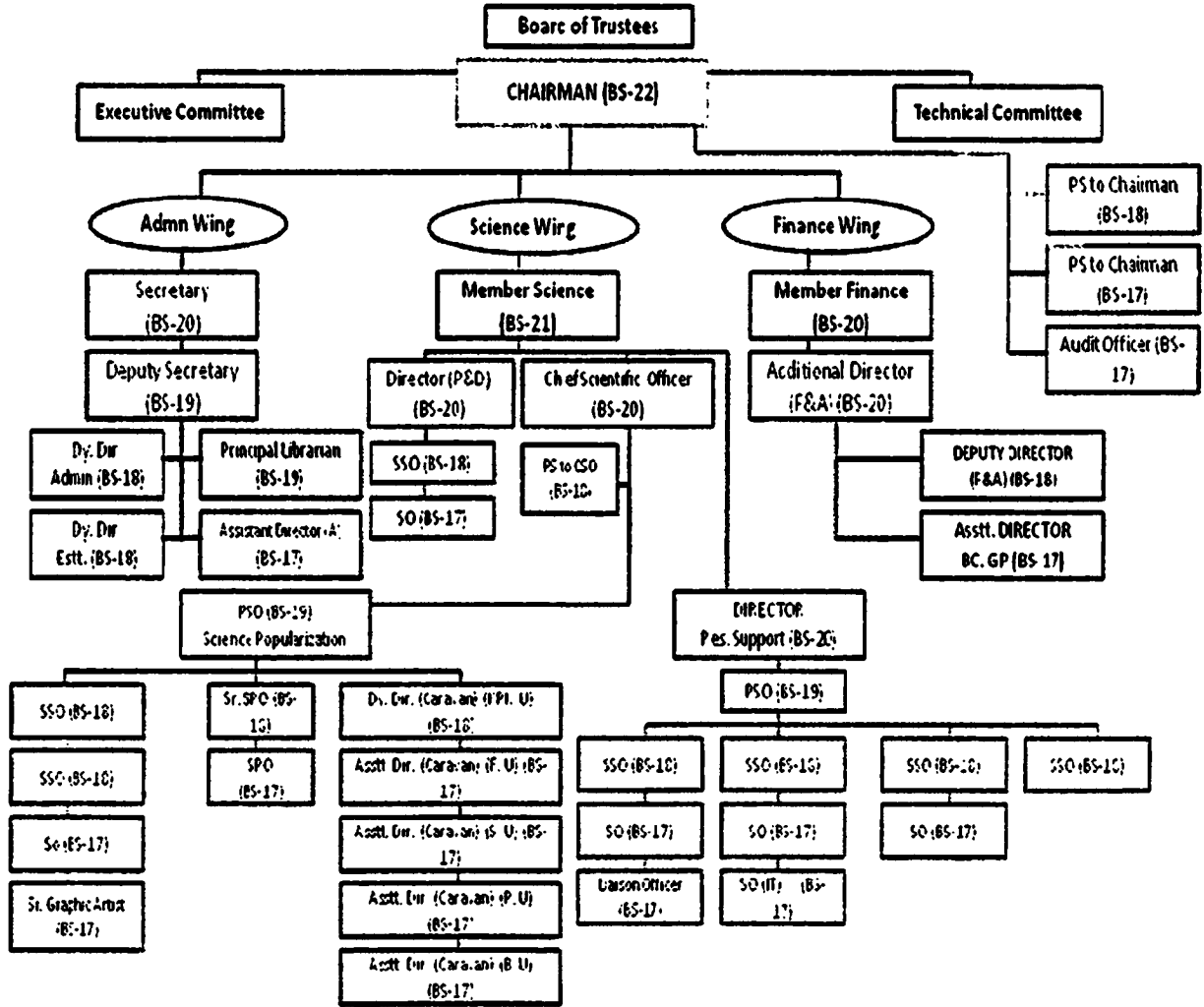
The organizational structure of Pakistan Science Foundation, Pakistan Museum of Natural History and Pakistan Scientific & Technological Information Centre is given in the forthcoming pages. The staff position in the Foundation, PMNH and PASTIC during the report period is as under:

a) PSF Sanctioned Posts and Organizational Chart

Sr. No	Name of Post	BS	Sanctioned strength
1.	Chairman	22	1
2.	Member Science	21	1
3.	Member Finance	20	1
4.	Secretary	20	1
5.	Director (P&D)	20	1
6.	Chief Scientific Officer	20	1
7.	Director (RS)	20	1
8.	Additional Director (F&A)	19	1
9.	Principal Scientific Officer	19	2
10.	Deputy Secretary	19	1
11.	Pr. Librarian	19	1
12.	Sr. Scientific Officer	18	6
13.	Sr. Science Promotion Officer	18	1
14.	Dy. Director (F&A)	18	1
15.	Dy. Director (Admn & Estt.)	18	2
16.	PS to Chairman	18	1
17.	Dy. Director (Caravan)	18	1
18.	Scientific Officer	17	7
19.	Sr. Graphic Artist	17	1
20.	Asstt. Director (Admn)	17	1
21.	Assistant Director (BC+GP)	17	1
22.	PS to CSO	17	1
23.	PS to Chairman	17	1
24.	Liaison Officer	17	1
25.	Asstt. Director (Caravan)	17	4
26.	Internal Audit Officer	17	1
27.	Science Promotion Officer	17	1
28.	Mechanic for Instruments	17	1
29.	Asstt. Scientific Officer	16	1
30.	Superintendent (Store/Admn/Estt)	16	4
31.	Accountant	16	4
32.	PA to Director (P&D)	16	1
33.	Graphic Artist	16	1

34.	Asstt. Scientific Officer (Caravan)	7	7
35.	Sr. Diver-Cum-Mechanic	16	4
36.	Sr. Planetarium Assistant	16	3
37.	Sr. Calligrapher	16	1
38.	Sr. Photographer	16	1
	Sub Total:-		71
37.	Stenographer	15	6
38.	Science Assistant (Caravan)	12	12
39.	Science Assistant	14	5
40.	Technical Assistant (IT)	14	1
41.	Cashier	14	1
42.	Audit & Accounts Assistant	14	2
43.	Assistant	14	1
45.	Stenotypist	12	5
47.	Planetarium Assistant	11	6
48.	Driver-Cum-Mechanic	11	5
49.	Sr. Electrician	11	1
50.	Sr. Carpenter	11	1
51.	UDC	9	6
52.	LDC/Typist	7	10
53.	Telephone Operator	5	1
54.	Driver/D.R	4/5/6/7	18
55.	DMO	5	1
56.	Quasid/Naib Quasid	1/2/3/4	19
57.	Mali	3/ 4	2
58.	Caravan Attendant	1/2/3	9
69.	Security Guard	1/2/3/4	15
60.	Sanitary Worker	1/2/3	4
	Sub Total:-		131
	G. Total:-		202

**PAKISTAN SCIENCE FOUNDATION
ORGANIZATIONAL CHART
2010-11**



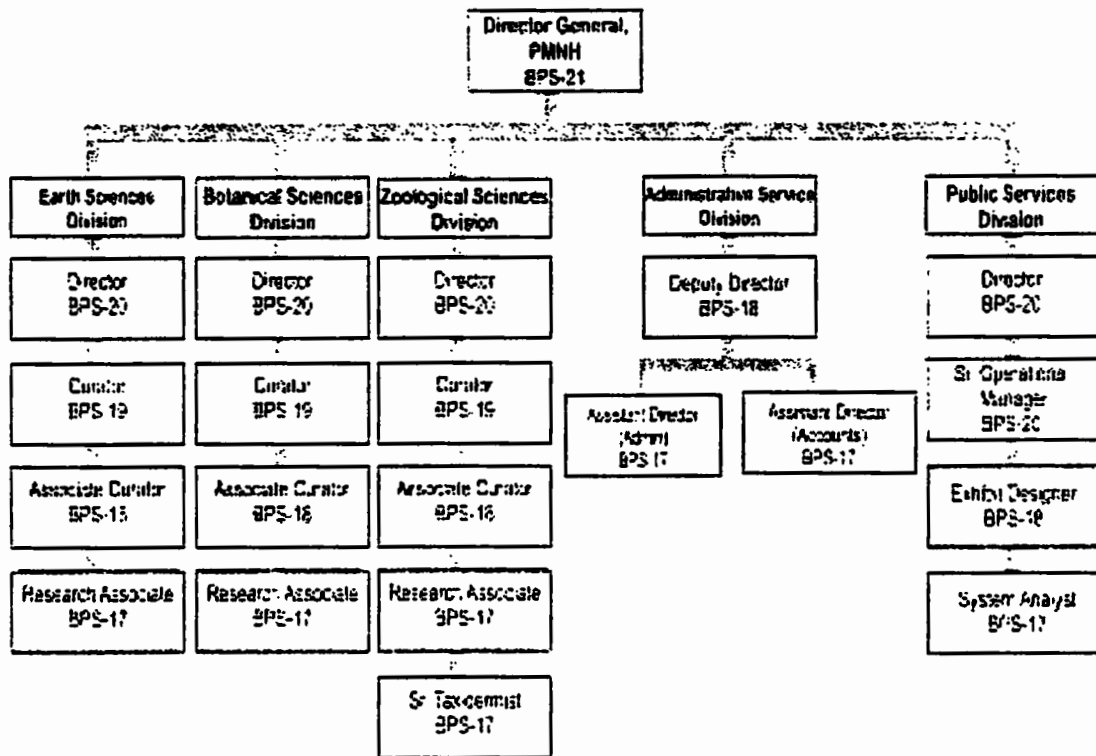
b) PMNH Sanctioned Posts and Organizational Chart

<u>Sr. No.</u>	<u>Position/Designation</u>	<u>BPS</u>	<u>No. of Posts</u>
1.	Director General	21	1
2.	Director	20	4
3.	Sr. Operational Manager	20	1
4.	Curator	19	6
5.	Associate Curator	18	8
6.	Deputy Director (Admin)	18	1
7.	Exhibit Designer	18	1
8.	Research Associate	17	16
9.	Sr. Taxidermist	17	1
10.	Assistant Director (Admin)	17	1
11.	Assistant Director (Accounts)	17	1
12.	System Analyst	17	1
13.	P.A to D.G	16	1
14.	Assistant Research Associate	16	2
15.	Taxidermist	16	1
16.	Casting Staff	16	1
17.	Fossil Technician	16	1
18.	Associate Artist	16	2
19.	Teacher Guide	16	1
20.	Children Education Programmer	16	1
21.	Sr. Modeler	16	1
22.	Sr. Photographer	16	1
23.	Accountant	16	2
24.	Assistant Librarian	16	1
25.	Superintendent	16	1
26.	Supporting Staff (BS 01-15)	-	78
	Total		136

PAKISTAN MUSEUM OF NATURAL HISTORY

ORGANIZATIONAL CHART

2010-2011



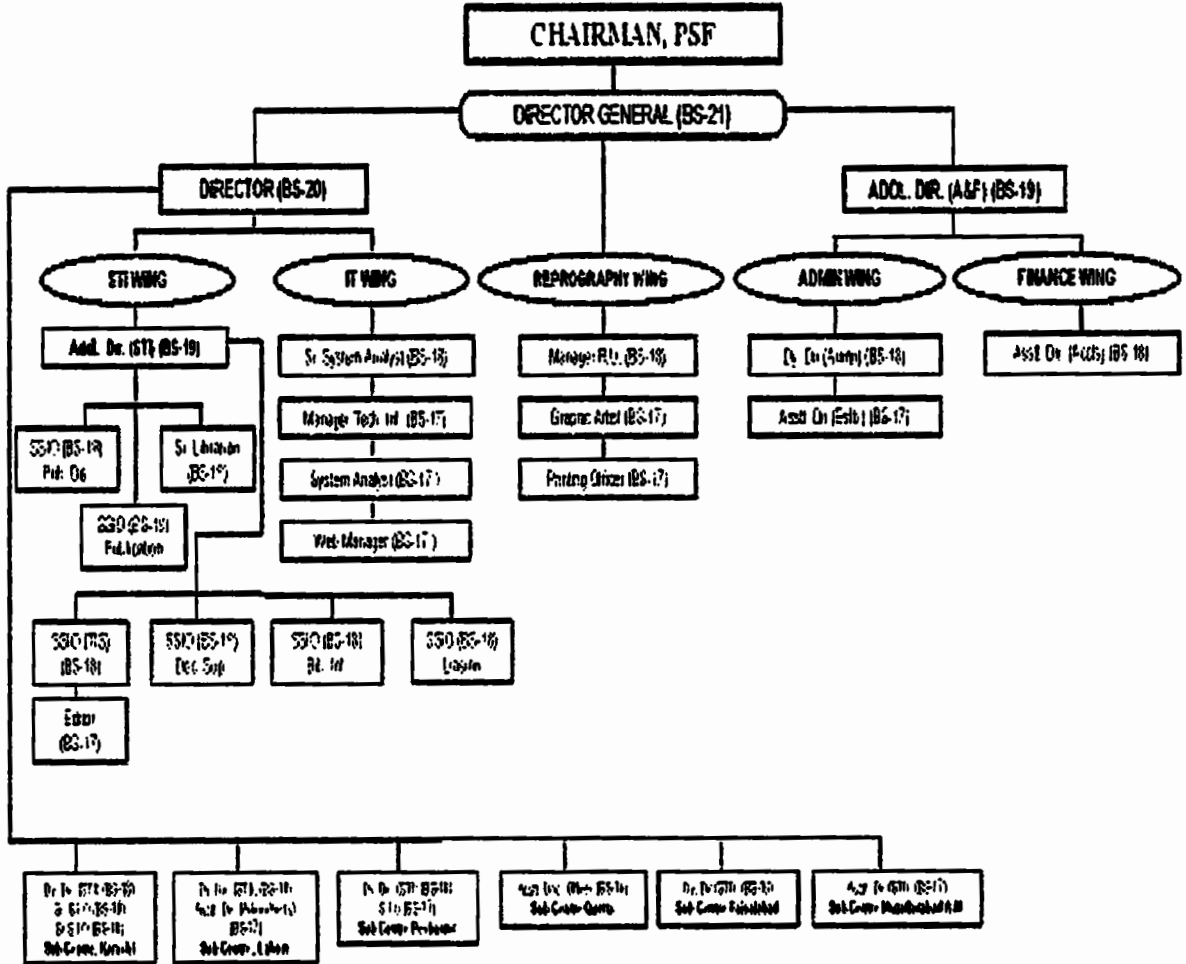
c) **PASTIC Sanctioned Posts and Organizational Chart**

BPS	Designation	Number of Posts		
		Total	Filled-in	Vacant
21	Director General	1	1	0
20	Director	1	1	0
19	Additional Director (A&F)	1	1	0
19	Additional Director (Doc)	1	1	0
18	Deputy Director (STI)	2	2	0
18	Senior Bibliographic Officer	1	1	0
18	Manager Reprographic Unit	1	1	0
18	Senior System Analyst	1	1	0
18	Senior Librarian	1	1	0
18	Senior Scientific Information Officer	4	4	0
17	Assistant Director (Accounts)	1	1	0
17	Assistant Director (STI)	4	3	1
17	Scientific Information Officer	5	3	2
17	Bibliographic Officer	1	1	0
17	System Analyst	1	0	1
17	Web Manager	1	1	0
17	Manager Technology Information	1	0	1
17	Printing Officer	1	1	0
17	Graphic Artist	1	1	0
17	Assistant Director (Admn)	1	1	0
17	Technology Information Officer (Marketing)	1	0	1
17	Editor	1	1	0
16	Asstt Accounts Officer	1	1	0
16	PA to Director General	1	1	0
16	Superintendent (Reprographic Unit)	1	1	0
16	Superintendent (Admn)	1	1	0
16	Assistant Scientific Information Officer	4	3	1
16	Assistant Documentation Officer	1	0	1
16	Assistant Programmer	2	2	0
16	Assistant Web Manager	1	1	0
16	Assistant Manager Reprographic Unit	1	1	0
16	Assistant Printing Officer	3	3	0
16	Accountant	1	1	0
	Total	50	42	8

Detail of Sanctioned Strength in BPS-1 to BPS-15

<u>BPS</u>	<u>Designation</u>	<u>Number of Posts</u>		
		Total	Filled	Vacant
15	Senior Data Control Assistant	2	2	0
14	Data Control Assistant	5	4	1
14	Layout Artist	1	1	0
14	Marketing/Field Assistant	1	1	0
14	Graphic Assistant	1	0	1
14	Mechanical Supervisor	1	1	0
14	Senior Offset Printer	2	0	2
14	Assistant	8	8	0
12	Stenotypist	4	3	1
12	Library Assistant	1	1	0
11	Technician	1	1	0
11	Offset Printer	1	0	1
11	Technical Assistant	1	0	1
11	Photo Assistant	1	1	0
10	DEO	4	3	1
9	UDC	10	6	4
7	Assistant Offset Printer	1	1	0
7	Electrician	1	1	0
7	LDC	10	9	1
6	Carpenter	1	1	0
5	Telephone Operator	1	1	0
5	Bindery Assistant	2	2	0
5	Offset Machine Assistant	2	2	0
4	Drivers	8	7	1
4	DMO	1	1	0
3	Head Mali	1	1	0
2	Record Sorter	1	1	0
2	Photo Attendant	2	2	0
2	Patent Attendant	2	2	0
2	Qasid	1	1	0
2	Library Attendant	2	1	1
1	Sanitary Workers	3	2	1
1	Mali	2	2	0
1	Security Guard	8	8	0
1	Naib Qasid	17	17	0
1	Bindery Helper	3	3	0
	Total	113	97	16
	Grand Total:	163	139	24

**PAKISTAN SCIENTIFIC & TECHNOLOGICAL INFORMATION CENTRE, (PASTIC)
ORGANIZATIONAL CHART 2010-11**



V. PHOTO GALLERY & PRESS CLIPPING

1.0 PSF Photo Gallery and Press Clipping



A group photo of Principal Investigators with the Convention's chief guest Dr. Amir Muhammad, Rector, National University of Computer and Emerging Sciences and Chairman, PSF



Students are being briefed about scientific models and panels during science caravan exhibitions



Students are being briefed about the Solar System inside the Planetarium



Students are entering the Planetarium to observe solar system



PSF Chairman Prof. Dr. Manzoor H. Soomro and Member Science Dr. Khalil Ahmad Ibupoto visit Posters Exhibition during Inter Board Science Poster Competition in Islamabad



French Expert demonstrating about LAMAP to Pakistani teachers



PSF Chairman Dr. Manzoor H. Soomro and French Expert during Closing Ceremony of 1st International Training Workshop for Pakistani Teachers



PSF Chairman Prof. Dr. Manzoor H. Soomro and Mr. Jean Saleneon, President, Academie des sciences, France Sign MoU in Paris, France



Students doing Science under “La main a la pate” program



H.E. Ambassador of France to Pakistan, Mr. Daniel Jouanneau and PSF Chairman Prof. Dr. Manzoor H. Soomro at the Concluding Ceremony of Biodiversity Expo.



Students participating in the Traveling Expo on Biodiversity in Islamabad on January 1, 2011



Dr. Ashfaq Ahmad, N.I., H.I., S.I., Advisor, Planning Commission delivers his talk on World Science Day for Peace and Development on Nov 10, 2010



Flood Relief activities of Science Caravan



PSF Chairman Prof. Dr. Manzoor H. Soomro briefs the media persons about PSF during Science Media Forum



Participants of the Forum take part in an open discussion on “Promotion of S&T through Mass Media – Ways and Means”



PSF Chairman Dr. Manzoor H. Soomro and COMSTECH Advisor Dr. Anwar Nasim award PSF souvenirs to participants of the Forum

Pakistan OBSERVER

Eyes & Ears of Pakistan

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Tuesday, Jun 01, 2010 - Jamadi-us-Sani 17, 1431 AH

PSF signs MoU with Lashela Varsity

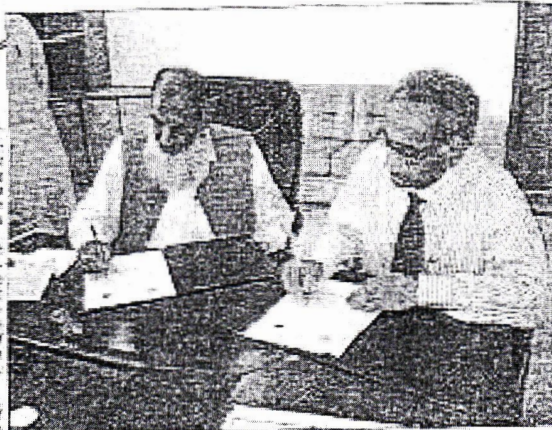
Staff Reporter

ISLAMABAD—Pakistan Science Foundation (PSF) has signed a project agreement with Lashela Varsity of Agriculture, Veterinary and Medical Sciences (LAVMS) Islamabad. The agreement is for a period of 2 years for the construction of Science Centre Building to promote scientific activities while the whole expenses will be borne by Fakhri Science Foundation. The work of construction will however start as soon as funds are released by PSF.

Pakistan Science Foundation, founded in 1977 through an Act of National Assembly, to promote and finance scientific activities, having a bearing on the socio-economic well-being of the country.

It is an autonomous organization under the umbrella of the Ministry of Science & Technology, Government of Pakistan. Pakistan Science Foundation supports scientific research and technical development programmes to promote scientific potential in the country.

On the occasion of MoU signing ceremony Chairman PSF Dr. Muzammil Hussain expressed his appreciation to the management and faculty members of Science & Technology in the Varsity and stated that the Varsity has a long and rich history of providing the concept of a series of activities, research, studies & quality education. The Varsity has a long history of providing quality education and its growth will be a great help to the country. This project will undoubtedly include many activities and will undoubtedly contribute to the field of Medical Sciences. The management of the Varsity has a long and rich history of providing quality education and its growth will be a great help to the country. This project will undoubtedly include many activities and will undoubtedly contribute to the field of Medical Sciences.



ISLAMABAD: Vice-Chancellor, Dr. Muzammil Hussain and Chairman PSF Dr. Muzammil Hussain signing MoU.

Media's vibrant role sought to project S&T

STAFF REPORT ISLAMABAD: Media should come forward to play its role in highlighting science and technology issues and developments to create a science culture in the country, as science and technology plays vital role in socio-economic development of any country.

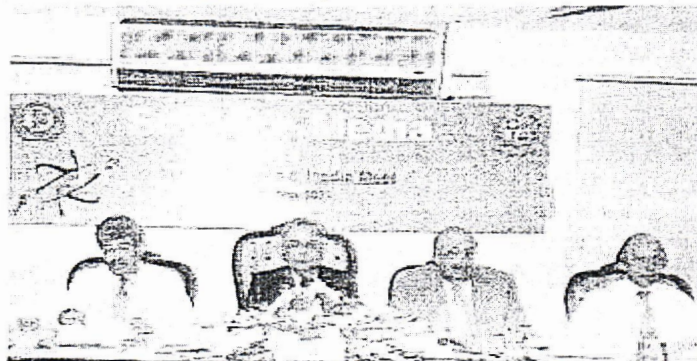
"Pakistan Science Foundation (PSF) is making its all-out efforts to achieve these objectives and media support to highlight the scientific activities in the country as due to different reasons S&T is not getting due importance." Chairman PSF Dr. Manzoor H. Soomro said that while addressing the "Science Media Forum" organized by the PSF here last week.

Highlighting the PSF functions and achievements, Dr Soomro said that PSF, established in 1975, is making its all-out efforts to promote science and technology and achieve media support to highlight scientific activities in the country.

He said that PSF has launched a mass awareness campaign to highlight science and technology issues and developments in order to create a science culture in the country.

He said that the science journalism plays key role in informing and educating the public about scientific and social applications, while facing unprecedented challenges and opportunities through new technologies.

The Chairman told PSF funded different S&T projects of R&D organizations and universities adopts a transparent process of funding after thorough



scrutiny regarding their socio-economic impacts.

He informed PSF also awarded prizes to people who made different scientific inventions to encourage research and development activities in the country.

"PSF in collaboration with French Embassy had started a project that inquiry based learning of science at primary standard level," he said adding the PSF Science Centers, PASTIC Centers and Nine Sciences Caravans were busy disseminating scientific knowledge among masses, especially the students.

Keynote speaker Dr Arzoo Nasim, Advisor Science, COMSATS, said that contribution of non-governmental individuals is essential for any change in the society for prosperity and development of the country.

He said that instead of only talks we should take practical steps and learn from examples of developed countries. He further said that there is a dire need to create awareness about importance of science at grass root level.

Ali Musarrat Zaidi Paraz, Editor Technology Times, spoke on "Print Media Vital for Popularization of Science and Technology". Kausar Sarreen, Programme Manager, Pakistan Broadcasting Corporation, explained on "Role of Radio Productions Image building of S&T Organizations" and Wajid Zulfarhan, Senior Producer, Dunya TV, on "Role of Television in Promotion of Research and Development".

The Participants of the forum including media person-

nel and scientists took active part in an open discussion on "Promotion of S&T Through Mass Media - Ways and Means". They gave various valuable recommendations to popularize science in the country.

They said that the media faces several challenges. One of these is to be able to talk about all kinds of scientific disciplines without having any relevant specific training. Another challenge that journalists must overcome is the provision of rigorous information that does not use scientific results to twist reality or raise false hopes.

PSF Chairman Dr Manzoor H. Soomro said that the recommendations formulated with consensus will be implemented in letter and spirit.

2.0 PMNH Photo Gallery and Press Clipping



Zoological samples from Zoological Survey Department on arrival at PMNH



Mr. Irfan Nadeem Sayeed, Secretary, MoST visiting PMNH on 7th January, 2011



PMNH stall on CDA Spring Plantation Campaign 2011, held on 24th February, 2011



Governor of the Punjab, Sardar Latif Khosa visiting PMNH stall at Spring Flower Festival



Participants of Female Teachers Training Workshop with the DG, PMNH and resource persons



Inaugural ceremony of the National Symposium on Biodiversity of Pakistan 2011, on 7th June, 2011



PMNH exhibition of rocks, minerals and fossils at NUST on 24th May, 2011

Daily Times ISLAMABAD^U

Your Right to Know

Islamabad | Jamadi us Sani 6, 1432 Tuesday, May 10, 2011

Teachers training workshop starts today at PMNH

Staff Report

ISLAMABAD: A two-day teachers training workshop titled "Training of Trainers to Conserve Nature" will start today at Pakistan Museum of Natural History (PMNH), Garden Avenue, Shakarparian, Islamabad.

PMNH, an affiliate of Pakistan Science Foundation, Ministry of Science and Technology, has organised the workshop for female teachers as a part of its educational programmes for female teachers to celebrate 2011 as National Women Year and International Biodiversity Decade. Some 56 female teachers from public and private sector educational institutions of Rawalpindi and Islamabad are participating in the workshop, which will be inaugurated today (Tuesday) at 9am at Garden Avenue, Shakarparian Islamabad.

The workshop is aimed at praising motherhood and

teachers' role as mothers who are the catalyst of change in society. The teachers will be imparted training in preservation and conservation of biodiversity (that is facing serious threats) in order to enhance their teaching skills and update them on biodiversity issues so that they could play their role effectively to save the biodiversity on which the future of coming generations depend.

The workshop comprises four technical sessions including zoological specimens' collection and preservation techniques, botanical specimens' collection and preservation techniques, geological specimens' collection and preservation techniques and nature photography to document natural history. The participants of the workshop will be awarded certificates in the closing ceremony to be held at 3:00pm tomorrow (Wednesday).

Daily Times
ISLAMABAD

Your Right to Know

Islamabad | Jamadi us Sani 26, 1432 Monday, May 30, 2011

Science-media forum participants visit PMNH

ISLAMABAD: The participants of the two-day Science-Media Forum "Where Science and Media Meet", organized by Pakistan Science Foundation (PSF) here, visited Pakistan Museum of Natural History (PMNH) the other day to get first hand information about its activities and achievements.

PMNH Director General Dr Syed Azhar Hasan gave a detailed presentation to the participants of the forum on PMNH functions, natural history specimens' collection, their documentation, display, research and public education. His presentation was based on multi-media slide show on research, display and public educational activities. Dr Hasan also apprised the forum participants, who were from across the country, about the natural history museum's role in science promotion and public education on various issues including sustainable use of natural resources, environment protection and biodiversity conservation.

PSF Member Science Dr



Khalil Ahmed Ibupoto, the museum directors, including Dr MK Leghari, Dr Muhammad Rafiq and Dr Nayyar Iqbal were also present on this occasion.

A documentary on biodiversity issues was also screened for the visitors. Later the forum participants visited different display galleries of the museum and appreciated the museum scientists and other officers and staff members' efforts to build such a magnificent treasure of knowledge to promote science in the country.

PSF organised the forum to

seek media support for disseminating scientific knowledge among the public for promoting a science culture in the country. The forum speakers included PSF Chairman Dr Manzoor H Soomro, COMSTECH Advisor Science Dr Anwar Nasim, PSF Chief Scientific Officer Farhat Rajpar, Editor Technology Times Ali Mustafa Zaidi Paras, Pakistan Broadcasting Corporation Program Manager Kausar Samreen and Duniya TV Senior Producer Wajid Zulqarnain. STAFF REPORT

3.0 PASTIC Photo Gallery and Press Clipping



UIP Symposium on “Building Effective Coordination between R&D and Industry for Enhancing Innovations, Competitiveness and Productivity of Indigenous Technologies” at RCCI, Rawalpindi



Chairman PSF & President LCCI exchanging MoU document flanked by Federal Minister for Science & Technology during “Technology Exhibition on Food & Agriculture and Seminar” at LCCI, Lahore.



Dr. Manzoor H. Soomro, Chairman, PSF presenting shields to Dr. Atta-ur-Rahman during Seminar on "Indigenous Commercialization potential of Academic Research" at Karachi Chamber of Commerce & Industry, Karachi



Dr. Muhammad Afzal, former Director General, PASTIC delivering his speech during Seminar on "Access to Global Information Resources through PASTIC S&T Information Services" at Q.A.U, Islamabad



Chairman PSF, Vice President LCCI , Federal Minister for Science & Technology (L to R) during inaugural Session of "Technology Exhibition on Food & Agriculture" at LCCI, Lahore



Mir Changez Khan Jamali Federal Minister for S & T visiting LCWU stall in the Technology Exhibition at Lahore



Dr. Manzoor H. Soomro, Chairman, PSF presenting shield to the Resource Person during UIP Symposium at Faisalabad Chamber of Commerce & Industry, Faisalabad.



Glimpses of PASTIC Seminar on "PASTIC S&T Information Services and Use of PASTIC S&T Database Library" at University of Azad Jammu & Kashmir, Muzaffarabad.



Director General, PASTIC presenting shield to the Vice Chancellor ISRA University, Hyderabad on the occasion of PASTIC Services Awareness seminar at Hyderabad.



Mir Changez Khan Jamali Federal Minister for S & T visiting PCSIR stall in the Technology Exhibition at Lahore



Glimpse of Poster Exhibition under University Industry Partnership (UIP) Programme at RCCI, Rawalpindi



Dr. Manzoor H. Soomro, Chairman, PSF delivering his talk during UIP Symposium at Lahore Chamber of Commerce & Industry, Lahore

Symposium at RCCI, Rawalpindi on 4th January, 2011

DAWN

LXV No. 4 Islamabad, Muharram 28, 1432 Tuesday, January 4, 2011 20 P.

Symposium

PASTIC, PSF, IRP and Rawalpindi Chamber of Commerce and Industry are jointly organising symposium on Building Effective Coordination between R&D and Industry at RCCI at 10am

DAWN

.com Vol. LXV No. 5 Islamabad, Muharram 29, 1432 Wednesday, January 5, 2011 20 :

R&D, industries liaison stressed

RAWALPINDI, Jan 4: The Pakistan Scientific and Technological Information Centre (PASTIC), Institute of Research Promotion and Rawalpindi Chamber of Commerce and Industry (RCCI) organised a symposium on 'Building Effective Coordination between Research and Development (R&D), and Industry' here on Tuesday.

The symposium was organised in collaboration with the University Industry Partnership Programme to develop relation between research objectives and local industries' needs.

It was emphasised that the universities and R&D organisations had to focus on research and address growing needs of the local industry to produce functional science and engineering workforce.

Additional Secretary of the Ministry of Industries and Production Tariq Shafi Chak hoped deliberations would lead to stronger linkages among academia, industrialists and the Ministry of Science and Technology through PASTIC and Pakistan Science Foundation (PSF).

He also hoped that the Public-Private Partnership would be strengthened for promoting socio-techno-economic environment throughout the country. The Ministry of Industries and Production would support the efforts of PASTIC and PSF, he said.

PSF Chairman Dr Manzoor Hussain Soomro said there was a dire need to make relevance between the functional knowledge and education that could be readily converted into commercial undertakings.—Our Reporter

THE NEWS

Wednesday

January 5, 2011

Academia, Industrialists' linkage stressed

RAWALPINDI: The university and R&D organisations have to increase their focus to tailor research and address growing needs of the local industry to produce functional science and engineering workforce.

According to a press release, this was the consensus in a symposium 'Building Effective Coordination between R&D and Industry' held at Rawalpindi Chamber of Commerce and Industries (RCCI), Pakistan Scientific & Technological Information Centre (PASTIC), Institute of Research Promotion (IRP) and RCCI organised the symposium under their collaborative university industry partnership programme.

Tariq Shafi Chak Additional Secretary Ministry of Industries said that the deliberations made in the symposium will lead to stronger linkages between the academia, the industrialists and the Ministry of Science and Technology through PASTIC and Pakistan Science Foundation. He congratulated PASTIC/PSF and RCCI for their efforts in successfully organizing the symposium and hoped that in future the public private partnership will be more strengthened and such activities will be carried out for promoting the socio-techno-economic environment throughout the country. He further said that Ministry of Industries and Production supports the efforts of PASTIC and PSF.

Chairman PSF Dr Manzoor Hussain Soomro said that there is dire need for making relevance between functional knowledge and education that can be readily converted into commercial undertakings. He said he was pleased that a huge number of researchers and industrialists were here to share their experiences.

Dr Sohail H. Naqvi Executive Director Higher Education Commission said that the industry, universities, research organizations or the government alone could not compete in global socio-techno-economic environment.

Symposium at FCCI, Faisalabad on 12th February, 2011



Islamabad, Rabi-ul-Awwal 9, 1432 Sunday, February 13, 2011

Link between research and industry urged

FAISALABAD, Feb 12: The Pakistan Scientific and Technological Information Centre (PASTIC), Institute of Research Promotion (IRP) and the Faisalabad Chamber of Commerce and Industry organized a symposium titled "Building Effective Coordination between the R&D and Industry" under the University Industry Partnership Programme at the FCCI here on Saturday.

The objective of the symposium was to develop a correlation between research objectives and priorities and needs of the local industry, says a press release.

It was emphasized that university and R&D organizations should focus more on tailoring research and address growing needs of the local industry to produce functional science and engineering workforce.

FCCI's Adhoc Management Committee chairman Muhammad Naseer Kamboh said that in future the public private partnership would be strengthened to promote the socio-techno-economic environment throughout the country.

Agriculture University Faisalabad vice-chancellor Dr Iqrar Ahmed Khan said today's deliberations would lead to stronger linkages between the

academia and the industry.

PSF chairman Dr Manzoor Hussain Soomro said there was a dire need for making relevance between the functional knowledge and education that could be readily converted into commercial undertakings.

Researchers from University of Agriculture, Government College University, National Institute of Biotechnology and Genetic Engineering, Nuclear Institute of Agriculture Biology, Ayub Agriculture Research Institute and National Textile University presented their innovative research.

Symposium at KPKCCI

DAWN

.com Vol. LXV No. 69 Islamabad, Rabi-us-Sani 5, 1432 Friday, March 11, 2011 26 P/

SCCI organises poster exhibition

PESHAWAR, March 10: The Sarhad Chamber of Commerce and Industry (SCCI) on Thursday organised a poster exhibition in collaboration with Pakistan Scientific and Technological Information Centre (PASTIC) here at chamber house. Chairman, Standing Committee on Commerce, Senate, Senator Ilyas Ahmad Bilour and president SCCI Usman Bashir Bilour inaugurated the exhibition. The research posters of different universities and PCSIR were displayed in the day-long exhibition.

Dr Manzoor Hussein Soomro, Director General PASTIC and Chairman, Pakistan Science Foundation, vice president, SCCI, Javed Akhtar, members of executive body, officials of Higher Education Commission and varsities researchers were present.

Addressing the ceremony, Senator Ilyas Bilour stressed the need for promoting academic and industries ties and said the industrial sector will boost with modern research in the province. There was need to exploit modern technology and enhancing culture of research, he added.

SCCI President Usman Bashir Bilour called for carrying out extensive research to develop contemporary equipments for curbing extremism and terrorism.

He lauded the efforts of PASTIC for arranging such a creative event and said the economic situation would be stabilised through introduction of modern and latest technology in commerce and trade sectors.

He extended full support and cooperation for cementing linkages between educational institutions and industry in the province.—

APP

TRUTH *The* MATTER Statesman
Friday, March 11, 2011

Statesman



Senator Nyas Ahmed Bilour and Usman Bilour during an exhibition of "Research Poster" organized by PASTIC here on Thursday. - APP

DAILY EXPRESS



اسلام آباد کراچی لاہور پشاور ملتان فیصل آباد گوجرانوالہ سرگودھا راجھ پور خانکھڑ اور کوئٹہ سے ایک وقت شائع ہونے والا واحد قومی روزنامہ

جلد 9 شماره 160 جمعہ المبارک 5 ربیع الثانی 1432ھ 11 مارچ 2011ء 26 بجائے 2067 ب فون 9-2654226 صفحات 12 قیمت 10 روپے

خیبر پختونخوا چیمبر ہاؤس میں تحقیق پر مبنی پوسٹر نمائش

پشاور (خصوصی رپورٹر) خیبر پختونخوا چیمبر آف کامرس اینڈ انڈسٹری اور پاکستان سائنسٹیک اینڈ ٹیکنالوجیکل انفارمیشن سنٹر (PASTIC) کے باہمی تعاون سے خیبر پختونخوا چیمبر ہاؤس میں مختلف یونیورسٹیز اور بی سی ایس آئی آر کی جانب سے ریسرچ پر مبنی پوسٹر ایگزپیشن کا انعقاد کیا جس کا افتتاح سینٹ کی سٹینڈنگ کمیٹی برائے تجارت کے چیئرمین سینیٹر الیاس احمد بلور اور خیبر پختونخوا

چیمبر کے صدر عثمان بشیر بلور نے کیا۔ ایگزپیشن کے افتتاح کے موقع پر PASTIC کے ڈائریکٹر جنرل اور پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر منظور حسین سومرو خیبر پختونخوا چیمبر کے نائب صدر جاوید اختر، ایگزیکٹو ممبران اور ہائیر ایجوکیشن کمیشن سمیت یونیورسٹیز کے ریسرچرز بھی کثیر تعداد میں موجود تھے۔ سینیٹر الیاس احمد بلور اور خیبر پختونخوا چیمبر کے صدر عثمان (باقی صفحہ 4 نمبر 60)



سینیٹر الیاس بلور، چیمبر کے صدر عثمان بلور اور دیگر پوسٹر نمائش دیکھ رہے ہیں

روشنی کل کی خدمت، آج کا نصب العین

روزنامہ

پشاور

پاکستان

ایڈیٹر
عبدالواحد یوسفی

صفحات 12

پشاور ایبٹ آباد سے ایک وقت شائع ہونے والا سب سے بڑا اخبار

جلد 22 جمعہ 11 مارچ 2011 5 ربیع الثانی 1432 ہجرت 10 مئی 2011ء شمارہ 61

خیبر پختونخوا چیمبر میں ریسرچ پر مبنی پوسٹر نمائش

خیبر ایلیاس بلور اور صدر خیبر پختونخوا چیمبر بلور نے افتتاح کیا اور ریسرچرز اور طلبہ نے جدید ٹیکنالوجی سے متعلق معلومات فراہم کیں۔

پشاور (آج ٹیوز) خیبر پختونخوا چیمبر آف کامرس اینڈ انڈسٹریز خیبر پختونخوا چیمبر ہاؤس میں مختلف یونیورسٹیوں اور بی بی سی خدمات کے چیمبر میں میگزین ایلیاس احمد بلور اور خیبر پختونخوا ٹرانسپورٹ اور پاکستان سائنٹفک اینڈ ٹیکنالوجیکل ایسوسی ایشن آف آرکی جانیب سے ریسرچ پر مبنی پوسٹر نمائش کا خیبر کے صدر عثمان شہر بلور نے کیا۔ میگزین ایلیاس احمد نفاذیشن سٹراٹجی (PASTIC) کے باہمی تعاون سے انعقاد کیا جس کا افتتاح سینیٹ کی سینڈنگ کمیٹی برائے بلور اور خیبر پختونخوا چیمبر (باقی صفحہ 10 بڑے نمبر 91)



پشاور میگزین ایلیاس بلور خیبر پختونخوا چیمبر آف کامرس میں سیمینار سے خطاب کرتے ہیں

DAILY MASHRIQ PESHAWAR

پشاور

عہدوں کے بانی

سید تاج میر شاہ

روزنامہ

مشرق

مسلل اشاعت کے 44 سال

پشاور اور اسلام آباد سبیک وقت شائع ہونے والا کثیر الاشاعت قومی اخبار

ABC
CERTIFIED

جمعۃ المبارک 5 ربیع الثانی 1432ھ 11 مارچ 2011ء 26 پھاگن



پشاور، سینئر ایس بلور اور چیئرمین کے صدر عثمان بلور پوسٹ نمائش دکھ رہے ہیں

صنعتوں اور یونیورسٹیز کے درمیان روابط کی ضرورت ہے

ملک میں تحقیق کیلئے سہولیات کا فقدان ہے، سیمینار سے مقررین کا خطاب

پشاور (کیسپس رپورٹرز) ملک کی معیشت کو مضبوط بنانے کے لیے ریسرچ کو فروغ دینے سمیت انڈسٹریوں اور یونیورسٹیز کے درمیان روابط موجودہ دور کی اہم ضرورت ہے بد قسمتی سے ملک میں تحقیق کے لئے سہولیات و آلات کا فقدان ہے اور اسی وجہ سے پاکستان اس میدان میں پیچھے رہ گیا ہے ان خیالات کا اظہار اسلام آباد کانج یونیورسٹی میں کوآپریٹو انہاسٹسٹ سیل اور ڈائریکٹوریٹ آف سائنس اینڈ ٹیکنالوجی کے اشتراک سے منعقد ہونے والے سیمینار سے مقررین نے خطاب کے دوران کیا تقریب کے مہمان خصوصی پروفیسر ڈاکٹر قادر بلوچ تھے جبکہ صدارت کوآپریٹو انہاسٹسٹ سیل کے ڈائریکٹر ڈاکٹر سریریا شاہ نے کی اس موقع پر ڈائریکٹوریٹ آف سائنس اینڈ ٹیکنالوجی کے تالیف اللہ اور عمران خان کے علاوہ ایم فل و پی ایچ ڈی کے طلباء و طالبات اور اساتذہ کی کثیر تعداد بھی موجود تھی۔

Member
A.P.N.S

Daily Surkhab Peshawar

ABC
CERTIFIED

و چیف ایڈیٹر: شوکت علی یوسفزئی

سرخاب

پشاور

روزنامہ

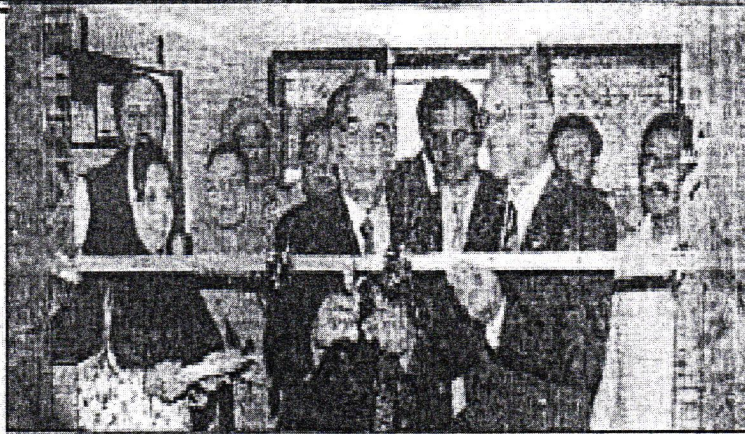
قیمت 7 روپے

پشاور اور اسلام آباد سے بیک وقت شائع ہونے والا قومی اردو روزنامہ

شمارہ 289

5 ربیع الثانی 1432 ہجری جمعہ المبارک 11 مارچ 2011ء 26 پھاگن

جلد 21



سینئر ایس ایس جی پبلشرز کے افتتاحی کارڈ

DAWN

.com Vol. LXV No. 151 Lahore, Jumadi-us-Sani 28, 1432 Wednesday, June 1, 2011 22

‘Allocations for science and tech to be increased’

By Our Staff Reporter

LAHORE, May 31: Federal Minister for Science and Technology Mir Chengez Khan Jamali has said that allocation for the science and technology sector is being increased in the forthcoming budget to help the country join the club of technologically advanced nations.

Speaking at the first technology exhibition and seminar on research and development in food and agriculture sector, Mr Jamali said low allocations for vital sectors like science and technology kept the country dependent on developed world despite the fact that it had no dearth of resources.

Stating that innovation was key to economic competitiveness, the minister said research institutions and researchers needed to come forward to address the gaps in the current scenario by developing world-class technologies. He said science and technology exhibitions could

serve as a marketplace to showcase technological innovations, products, projects, services and solutions in different industrial sectors. These exhibitions would enable industrial experts and researchers from across the country to identify joint objectives, activities and initiatives and focus on industrial science and technology-related problems and their solutions. They would promote science and technology partnerships for global sustainable development.

He said Pakistan was an agricultural country but it was facing low agricultural productivity problem like many other countries. He stressed the need to increase food and fibre production to come up not only with ever-growing needs of the country, but for the sake of foreign exchange earnings and self-sufficiency.

The federal minister said that growing population, urbanisation, a lack of resources to deal with pre and post harvest losses in agriculture and

problems of environmental and food hygiene meant that food systems would continue to be under stress.

Mr Jamali said the applied technology in food industry had transformed the economic and cultural structure of the developed countries. Major changes had been made to systems of food production, processing, distribution and consumption. Applications of science and technology within the food system had allowed production of food in adequate quantities to meet the needs of nations. He stressed that scientific and technological advancements must be accelerated to feed the growing population.

LCCI senior vice-president Sheikh Mohammad Arshad, Pakistan Science Foundation chairman Dr Manzoor H Soomro and Institute of Research Promotion CEO Abid H K Shirwani also spoke.

Later, Mr Jamali and Mr Arshad inaugurated the first technology exhibition at the LCCI.

BUSINESS RECORDER

Lahore, Wednesday 1 June 2011, 28 Jamadi-us-Sani 1432

S&T sector allocation being increased in next budget: minister

RECORDER REPORT

LAHORE: Federal Minister for Science and Technology Chengez Khan Jamali has said that allocation for science and technology sector is being increased in the upcoming budget to help the country join the club of technologically advanced nations.

He stated this at the First Technology Exhibition and Seminar on Research and Development in Food and Agriculture Sector. He said that innovation is key to economic competitiveness, and research institutions and researchers would have to come forward to address the gaps in the current scenario by developing world class technologies. He regretted that the low allocations for the vital sectors like science and technology had kept the country dependent on developed world despite the fact that the country has no dearth of resources.

Jamali said that Science and Technology exhibitions provide a marketplace to showcase technological innovation in the field of Science and Technology, products, projects, services and solutions in different industrial sectors. These exhibitions enable the industrial experts and researchers from across the country to identify joint objectives, activities and initiatives and to place focus on industrial Science and Technology related problems and their solutions as well as promote S&T partnerships for global sustainable development.

He said that Pakistan is an agricultural country and its economy is mainly agrarian. It is the biggest sector of the economy

and earns major national income from it. Pakistan like many developing countries of the world is facing the problem of low agricultural productivity in spite of the fact that the country is blessed with a galaxy of climate, soil condition and irrigation water.

The country is totally dependent on agriculture for the supply of food and fiber. Thus, it is imperative to increase food and fibre production to cope not only with the ever-growing requirements of the country, but for the sake of earning foreign exchange and to attain self-sufficiency. "Rapid agricultural growth can stimulate and thus sustain the pace of industrial growth, thus setting into motion a mutually reinforcing process of sustained economic growth," he added.

The Minister said that the problems of growing population, urbanisation, lack of resources to deal with pre and post harvest losses in food and problems of environmental and food hygiene mean that food systems continue to be stressed, adversely affecting quality and safety of food supplies and people are therefore exposed to a wide range of potential food quality and safety risks.

He said that applied technology in the food industry has transformed the economic and cultural structure of the developed countries. Major changes have been made in the systems of food production, processing, distribution and consumption. Applications of science and technology within the food system have allowed production of food in adequate quantities to meet the needs of society. Scientific and technological advancements must be accelerat-

ed in order to feed growing population, he added.

LCCI Senior Vice President Mohammad Arshad said that an immediate shift to R&D in Food & Agriculture sectors will not only bring prosperity at wider scope but would also open up new avenues to get out of traditional ways of managing economic affairs. He said that research was critical to taking a strategic approach to planning or economic growth and improved productivity. "It is only through economic growth and improved productivity that we could create employment opportunity."

He said that the economies which were far behind Pakistan in the 1960s have surged far ahead in most economic and social indicators on the basis of research. And only due to unavailability of authentic data on many counts Pakistan could not realise its true potential. He said the country needs to allocate more funds for Research and Development to achieve the desired results.

Chairman of Pakistan Science Foundation Dr Manzoor H Soomro and CEO Institute of Research Promotion (IRP) Abid H K Shirwani threw light on importance of research and gave a detailed briefing on ongoing research projects while Director of Rice Institute Dr Akhtar, Dr Farid A Malik, Dr Mubarak Ali, Asif Sharif, Dr Kausar Abdullah, Regional Director NIP Mohsin Syed, and LCCI Executive Committee Member Dr Shahid Raza also spoke on the occasion.

Meanwhile, the Minister and LCCI Senior Vice President Arshad jointly inaugurated the First Technology Exhibition.

The Nation

Allocation for science, tech to be increased in budget

OUR STAFF REPORTER

LAHORE - Federal Minister for Science and Technology Mir Changez Khan Jamali has said that the allocation for science and technology sector is being increased in the upcoming budget to help country join the club of technologically advanced nations.

The Federal Minister was speaking at First Technology Exhibition and seminar on R & D in Food and Agriculture Sector. LCCI Senior Vice President Sheikh Mohammad Arshad, Chairman Pakistan Science Foundation Dr Manzoor H Soomro, CEO Institute of Research Promotion (IRP) Abid H K Shrivani, Director Rice Institute Dr Akhtar, Professor Dr Farid A Malik, Dr Mubarak Ali, Asif Sharif, Dr Kausar Abdullah Malik, Regional Director NIP Mohsin Syed, LCCI Executive Committee Member Dr Shahid Raza also spoke on the occasion.

Mir Changez Khan Jamali regretted that the low allocations for the vital sectors like science and technology had kept the country dependent on developed world despite the fact that country has no dearth of resources.

The Minister said that innovation is a key to economic competitiveness and research institutions and researchers would have to come forward to address the gaps in the current scenario by developing world-class technologies.

The Federal Minister said that Science and Technology exhibitions provide a marketplace to showcase S&T Technological innovations, products, projects, services and solutions in different industrial sectors. These exhibitions enable the industrial experts and researchers from across the country to identify joint objectives, activities and initiatives and to place focus on industrial Science & Technology related problems and their solutions as well as promote S&T partnerships for global sustainable development.



LAHORE: LCCI SVP Sheikh Muhammad Arshad presents a souvenir to Federal Minister for Science & Technology Mir Changez Khan.



LAHORE: Federal Minister for Science and Technology Mir Changez Khan Jamali addressing during Technology Exhibition 2011 Food and Agriculture jointly organized by the Pakistan Scientific & Technological Information Center, PASTIC, Pakistan Science Foundation, PSF, Institute of Research Promotion and IRP at Chamber of Commerce and Industry. -Staff photo

'Innovation vital to economic growth'

Staff Reporter

LAHORE: The Federal Minister for Science and Technology Mir Changez Khan Jamali has said that the allocation for science and technology sector is being increased in the upcoming budget to help country join the club of technologically advanced nations.

The Federal Minister was speaking at First Technology Exhibition and seminar on R & D in Food and Agriculture Sector. LCCI Senior Vice President Sheikh Mohammad Arshad, Chairman Pakistan Science Foundation Dr

Manzoor H Soomro, CEO Institute of Research Promotion (IRP) Abid H R Shirwani, Director Rice Institute, Dr Akhtar, Professor Dr Farid A Malik, Dr Muhsin Ali, Asif Sharif, Dr Kausar Abdullah Malik, Regional Director NIP Mohsin Syed, LCCI Executive Committee Member Dr Shahid Raza also spoke on the occasion.

Mir Changez Khan Jamali regretted that the low allocations for the vital sectors like science and technology had kept the country dependent on developed world despite the fact that country has no dearth of resources.

THE EXPRESS
TRIBUNE

PARTNER OF

Wednesday

JUNE 1, 2011

Upcoming budget

'More allocation for science and technology'

Minister says innovation is the key to economic competitiveness

OUR CORRESPONDENT

LAHORE

To help Pakistan to join the club of technologically advanced nations, the finance ministry has planned more allocations in the upcoming budget for the science and technology sector, said Federal Minister of Science and Technology Mir Chengez Khan Jamali.

While speaking at the first technology exhibition at the Lahore Chamber of Commerce and Industry (LCCI), Jamali said that low allocations in vital sectors like science and technology,

had made the country dependent on the developed world.

He said that innovation was the key to economic competitiveness, and research institutions and researchers have to develop world-class technologies, in order to fill gaps in the sector.

According to Jamali, science and technology exhibitions provide a marketplace to showcase technological innovations and solutions in different industrial sectors.

LCCI Senior Vice President Sheikh Mohammad Arshad said that an immediate shift to research and development in food and agricultural sectors will lead to prosperity, saying that research was critical to economic growth.

حیف ایڈیٹر: ضیا شاہد

لاہور

Daily
Khabrain

روزنامہ

ایڈیٹر: امتنان شاہد

پلاہ 28 جمادی الثانی 1432ھ کے جون 2011ء 18 جھٹہ 2068 ب صفحہ 12 قیمت 10 روپے



لاہور چیئرمین کے سینیٹر نائب صدر شیخ محمد شاد قاتی وزیر برائے سائنس و ٹیکنالوجی میر چنگیز خان جمالی کو یادگاری شیلڈ پیش کر رہے ہیں، لاہور چیئرمین کے ایگزیکٹو ڈائریکٹر ڈاکٹر شاہد رضا اور دیگر مہمانان گرامی ان کے ہمراہ کھڑے ہیں۔

جب میں سائنس و ٹیکنالوجی کیلئے مختصر فنڈ میں خاطر خواہ اضافہ کیا جائے گا تو قاتی وزیر

جدت کا فروغ معاشی ترقی کا راز، تحقیقی ادارے، محققین ملک کو ٹیکنالوجی کے حوالے سے ترقی یافتہ بنانے کیلئے اپنا کردار ادا کریں، چنگیز خان جمالی

سائنس و ٹیکنالوجی سے متعلقہ نمائندگی و مالی ایجاٹ مصنوعات پر اجلاس سے روشناس کرانی مستحق اداروں کو مسائل کا حل بتاتی ہیں لاہور چیئرمین سینیٹ سے خطاب

لاہور (کامرس رپورٹر) وفاقی وزیر برائے سائنس و ٹیکنالوجی میر چنگیز خان جمالی نے کہا ہے کہ وفاقی بجٹ میں سائنس و ٹیکنالوجی کے شعبے کے لیے مختص فنڈ میں خاطر خواہ اضافہ کیا جا رہا ہے جس سے ملک میں ٹیکنالوجی کے شعبے کو فروغ حاصل ہوگا۔ وہ گزشتہ روز لاہور چیئرمین آف کامرس اینڈ انڈسٹری میں پہلی ٹیکنالوجی نمائش اور خوراک و زراعت میں تحقیق و ترقی کے موضوع منعقد ہونے پر خطاب کر رہے تھے۔

لاہور چیئرمین کے سینیٹر نائب صدر شیخ محمد شاد، چیئرمین پاکستان سائنس فاؤنڈیشن ڈاکٹر منظور ایچ سومرو، چیف ایگزیکٹو آفیسر انسٹی ٹیوٹ آف ریسرچ

پر دوشن ماہر ایچ کے شیر والی، ڈائریکٹر ریس انسٹی ٹیوٹ ڈائریکٹر پروفسر فرید اسلم ملک، ڈاکٹر مبارک علی، آصف ٹریف، ڈاکٹر کوثر عبداللہ ملک، رینجیل ڈائریکٹر این آئی بی حسن سید اور لاہور چیئرمین آئی ٹی ایس مینیجنگ ڈائریکٹر شاد رضا نے بھی اس موقع پر خطاب کیا۔ میر چنگیز خان جمالی نے کہا کہ سائنس و ٹیکنالوجی جیسے اہم شعبے کے لیے کم فنڈ ہونے کی وجہ سے ملک کو دیگر ممالک پر انحصار کرنا پڑ رہا ہے حالانکہ ملک میں وسائل اور صلاحیتوں کی کوئی کمی نہیں۔ انہوں نے کہا کہ جدت کا فروغ معاشی ترقی کا راز ہے لہذا تحقیقی اداروں اور محققوں کو چاہیے کہ ملک کو ٹیکنالوجی کے حوالے سے ترقی یافتہ بنانے کے لیے اپنا

کردار ادا کریں۔ انہوں نے کہا کہ سائنس و ٹیکنالوجی سے متعلقہ نمائشیں دنیا کو ایجادات، مصنوعات، پراجیکٹس سے روشناس کراتی اور صنعتی اداروں کو ان کے مسائل کا حل بتاتی ہیں۔ یہ نمائشیں صنعتی ماہرین اور محققوں کو اس قابل بناتی ہیں کہ وہ سائنس و ٹیکنالوجی سے متعلقہ مسائل اور ان کے حل پر غور و توجہ مرکوز کر سکیں۔ انہوں نے کہا کہ پاکستان کی معیشت کا دار و مدار زراعت پر ہے۔ بہت سے ترقی پذیر ممالک کی طرح پاکستان کو بھی کم زرعی پیداوار جیسے مسئلے کا سامنا ہے باوجود اس کے کہ پاکستان بہتری موسموں، زرخیز زمین اور آبپاشی کے نظام جیسی نعمتوں سے مالا مال ہے۔

بانی : میر خلیل الرحمن

روزنامہ

بدھ 28 جمادی الثانی 1432ھ یکم جون 2011ء



لاہور چیمبر کے سینئر نائب صدر شیخ محمد ارشد وفاقی وزیر سائنس
و ٹیکنالوجی چنگیز خان جمالی کو شیلڈ دے رہے ہیں

آئندہ مالی سال سائنس و ٹیکنالوجی

کے بجٹ میں اضافہ ہوگا: چنگیز جمالی

لاہور (اکنامک رپورٹر) وفاقی وزیر برائے سائنس و ٹیکنالوجی
میر چنگیز جمالی نے کہا ہے کہ آئندہ مالی سال کے دوران سائنس
اور ٹیکنالوجی کے بجٹ میں اضافہ کیا جائیگا جس سے ٹیکنالوجی
کو فروغ حاصل ہوگا۔ لاہور چیمبر کے سیمینار اور ٹیکنالوجی کی
نمائش سے خطاب میں انہوں نے کہا کہ ملک میں صلاحیتوں
کی کمی نہیں لیکن فنڈز کی کمی ترقی کی راہ میں رکاوٹ ہے۔

بہترین جہاد جابر سلطان کے سامنے کلمہ حق کہنا ہے۔ (حدیث رسول اللہ صلی اللہ علیہ وآلہ وسلم)



نوائے وقت

پورے پاکستان کے لیے

بدھ 28 جمادی الثانی 1432ھ / یکم جون 2011ء مسلسل اشاعت کے 71 سال

یکم جون 2011ء

خوراک و زراعت میں تحقیق و ترقی کے موضوع پر سیمینار سے خطاب کر رہے تھے۔ لاہور چیئرمین کے سینئر نائب صدر شیخ محمد ارشد، چیئر مین پاکستان سائنس فاؤنڈیشن ڈاکٹر منظور ایچ سومرو، چیف ایگزیکٹو آفیسر انسٹی ٹیوٹ آف ریسرچ پروموشن غابد ایچ کے شیردانی، ڈائریکٹر رائس انسٹی ٹیوٹ ڈاکٹر اختر، پروفیسر فرید اے ملک، ڈاکٹر مبارک علی، آصف شریف، ڈاکٹر کوثر عبداللہ ملک، ریجنل ڈائریکٹر این آئی پی محسن سید اور لاہور چیئرمین کے ایگزیکٹو کمیٹی رکن ڈاکٹر شاہد رضانے بھی اس موقع پر خطاب کیا۔

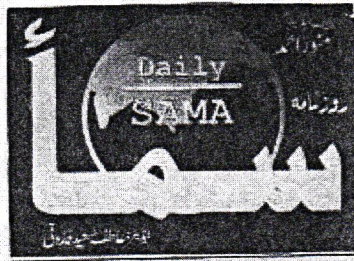
وفاقی بجٹ میں سائنس ٹیکنالوجی کے فنڈز میں اضافہ کیا جائیگا، وفاقی وزیر میر چنگیز جمالی

لاہور (کامرس رپورٹر) وفاقی وزیر برائے سائنس و ٹیکنالوجی میر چنگیز خان جمالی نے کہا ہے کہ وفاقی بجٹ میں سائنس و ٹیکنالوجی کے شعبے کے لیے مختص فنڈز میں خاطر خواہ اضافہ کیا جا رہا ہے جس سے ملک میں ٹیکنالوجی کے شعبے کو فروغ حاصل ہوگا۔ وہ گذشتہ روز لاہور چیئرمین آف کامرس اینڈ انڈسٹری میں پہلی ٹیکنالوجی نمائش اور

اساتیس



الاعوانہ وقتی وزیر پیٹرنگر جہاں کا ساتیس اینڈ ٹیکنالوجی سٹیجیٹار کے شرکاہ گیا تھو گروپ فوٹو



روزنامہ ساما، 17 جون 2011ء

ساتیس ٹیکنالوجی کے فوٹی بکٹ میں وضو کیا جا رہا ہے

اساتیس کے ایڈیٹر جی ایم ایف کے ساتھ ساتھ دیگر ساتیس کے ایڈیٹرز اور جرنلسٹوں نے ایک فوٹی بکٹ میں وضو کیا ہے۔ اس موقع پر ان کے ساتھ دیگر ساتیس کے ایڈیٹرز اور جرنلسٹوں نے بھی وضو کیا ہے۔ اس موقع پر ان کے ساتھ دیگر ساتیس کے ایڈیٹرز اور جرنلسٹوں نے بھی وضو کیا ہے۔



فوڈ ایسوسی ایشن کے ایڈیٹر جی ایم ایف نے ساتیس کے ایڈیٹر اور جرنلسٹوں کو فوٹی بکٹ میں وضو کیا ہے۔

روزنامہ ”عوامی زندگی لاہور“ (6) یکم جون 2011ء



بھارت

روزنامہ

بدھ
یکم جون 2011ء



ٹاؤر چیئرمین کے سینئر نائب صدر شیخ محمد ارشد وفاق وزیر برائے سائنس و ٹیکنالوجی میر چنگیز خان جمالی کو یادگاری شیڈ پیش کر رہے ہیں

بھارت میں شیعہ سائنس و ٹیکنالوجی کا فنڈ بڑھایا جا رہا ہے میر چنگیز خان

دو دنوں اطراف سے مذاکرات کا آئندہ دور اسلام آباد میں کرنے پر بھی اتفاق کر لیا گیا

اسلام آباد (آئی ڈی) پاکستان اور بھارت نے سائنس کے معاملے پر باہمی مفاد اور نتیجہ خیز مذاکرات جاری رکھنے پر اتفاق ہوا ہے جبکہ دونوں اطراف سے اس بات کو تسلیم کیا گیا ہے کہ سائنس میں 2003 سے جاری میزفاہر برقرار ہے۔ نئی دہلی میں دینا کے سب سے اونچے فوجی ماہر سائنس کے معاملے پر دوروزہ مذاکرات اختتام پذیر ہو گئے ہیں جس کے بعد نئی دہلی اور اسلام آباد کے دفتر خارجہ سے بیک وقت جاری ہونے والے مشترکہ اعلامیہ میں کہا گیا ہے کہ پاکستان اور بھارت کے سیکرٹری دفاع سطح کے مذاکرات 30 اور 31 مئی کو نئی دہلی میں ہوئے۔ پاکستانی وفد کی قیادت لطفیہ جنرل (ر) سید اطہر علی اور بھارت کے وفد کی قیادت بھارتی سیکرٹری دفاع بروہب کار نے کی جبکہ پاکستانی

سیکرٹری دفاع نے بھارتی وزیر دفاع اس کے اتھوری سے بھی ملاقات کی دونوں اطراف نے جاری مذاکراتی عمل کا خیر مقدم کیا گیا مذاکرات خوشگوار اور دوستانہ ماحول میں ہوئے۔ ان مذاکرات سے ایک دوسرے کو سائنس کے معاملے پر کھینچنے میں مدد ملی۔ دونوں اطراف سے تسلیم کیا گیا کہ سائنس میں 2003 سے جاری میزفاہر برقرار ہے جبکہ دونوں اطراف نے سائنس کے مسئلے کے حل کیلئے اپنی تہاویز اور موقف واضح کیا پاکستان کی جانب سے سائنس پر نان بیچریشن کیا گیا۔ دونوں ممالک نے نتیجہ خیز اور باہمی مفاد مذاکرات جاری رکھنے پر اتفاق کیا اور دونوں نے باہمی مشاورت سے تاریخ طے کرنے کے بعد اسلام آباد میں دوبارہ مذاکرات کرنے پر اتفاق کیا۔



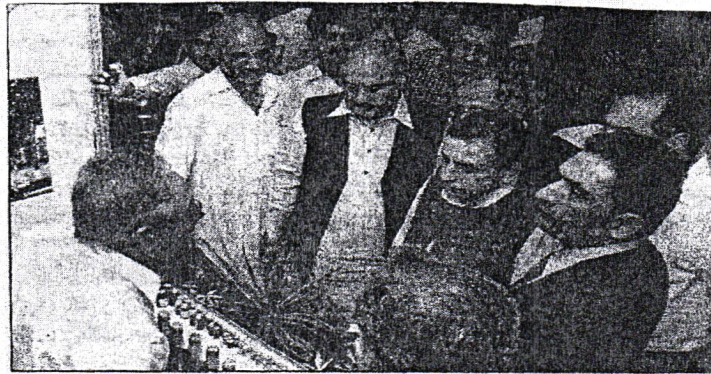
لاہور: وفاقی وزیر سائنس و ٹیکنالوجی چنگیز خان جمالی لاہور چیئر آف کامرس میں سیمینار سے خطاب کر رہے ہیں۔

سائنس و ٹیکنالوجی کے شعبہ کیلئے مختصر فنڈز میں اضافہ

لاہور: وفاقی وزیر سائنس و ٹیکنالوجی چنگیز خان جمالی نے کہا ہے کہ آئندہ بجٹ میں سائنس و ٹیکنالوجی کیلئے زیادہ رقم مختص ہوں گی جس کیلئے منصوبہ بندی کی گئی ہے اور دیگر حکام سے بات چیت جاری ہے۔ حکومت کی کوشش ہے کہ آئندہ بجٹ عوام دوست ہو۔ ہماری جمہوری حکومت ہے اور کوشش ہے کہ تمام سیاسی جماعتوں کو ساتھ لے کر چلیں۔ ان خیالات کا اظہار انہوں نے گزشتہ روز لاہور ایوان ہائے صنعت و تجارت میں ٹیکنالوجی کی نمائش اور سیمینار سے خطاب اور میڈیا سے گفتگو کرتے ہوئے کیا۔ قبل ازیں تقریب سے خطاب کرتے ہوئے وفاقی وزیر سائنس و ٹیکنالوجی چنگیز خان جمالی نے کہا کہ وفاقی بجٹ میں سائنس و ٹیکنالوجی کے لیے مختصر فنڈز میں خاطر خواہ اضافہ کیا جا رہا ہے جس سے ملک میں ٹیکنالوجی کے شعبہ کو فروغ حاصل ہوگا۔ لاہور چیئر آف کامرس میں سائنس و ٹیکنالوجی کے شعبہ کیلئے مختصر فنڈز میں اضافہ کے سلسلے میں وفاقی وزیر سائنس و ٹیکنالوجی چنگیز خان جمالی نے کہا کہ سائنس و ٹیکنالوجی جیسے اہم شعبے کے لئے کم فنڈز ہونے کی وجہ سے ملک کو دیگر ممالک پر اٹھار کرنا پڑ رہا ہے حالانکہ ملک میں وسائل اور صلاحیتوں کی کوئی کمی نہیں۔ انہوں نے کہا کہ جدت کا فروغ معاشی ترقی کا راز ہے لہذا حقیقی اداروں اور محققوں کو چاہیے کہ ملک کو ٹیکنالوجی کے حوالے سے ترقی یافتہ بنانے کے لیے اپنا کردار ادا کریں۔ انہوں نے کہا کہ سائنس و ٹیکنالوجی سے متعلقہ نمائشیں دنیا کو ایجادات، مصنوعات، پرائیکٹس سے روشناس کرانی اور صنعتی اداروں کو ان کے مسائل کا حل بتانی ہیں۔ (اسے پی ٹی)

DAILY EXPRESS

روزنامہ ایکسپریس لاہور



چیکیز خان جمالی لاہور جیمبر میں سال دیکھ رہے ہیں، ساتھ نائب صدر شیخ محمد ارشد شریک ہیں۔

بجٹ میں سائنس و ٹیکنالوجی کیلئے فنڈز میں اضافہ کیا جائے گا

ملک میں وسائل اور صلاحیتوں کی کمی نہیں، سائنس و ٹیکنالوجی جیسے اہم شعبے کیلئے کم فنڈز کی وجہ سے دیگر ممالک پر انحصار کرنا پڑ رہا ہے۔

لاہور (خاتم) وفاقی وزیر برائے سائنس و ٹیکنالوجی میر چیکیز خان جمالی نے کہا ہے کہ وفاقی بجٹ میں سائنس و ٹیکنالوجی کے شعبے کیلئے مختص فنڈ میں خاطر خواہ اضافہ کیا جا رہا ہے جس سے ملک میں ٹیکنالوجی کے شعبے کو فروغ حاصل ہوگا۔ گذشتہ روز لاہور جیمبر آف کامرس اینڈ انڈسٹری میں پہلی ٹیکنالوجی نمائش اور خودک و زراعت میں تحقیق و ترقی کے موضوع پر منعقدہ سیمینار سے خطاب کرتے ہوئے انہوں نے کہا کہ سائنس و ٹیکنالوجی جیسے اہم شعبے کیلئے کم فنڈز ہونے کی وجہ سے ملک کو دیگر ممالک پر انحصار کرنا پڑ رہا ہے حالانکہ ملک میں وسائل اور صلاحیتوں کی کوئی کمی نہیں۔ انہوں نے کہا کہ جدت کا فروغ سماجی ترقی کا راز ہے لہذا تحقیقی اداروں اور محققین کو چاہیے کہ ملک کو ٹیکنالوجی کے حوالے سے ترقی یافتہ بنانے کیلئے اپنا کردار ادا کریں۔

انہوں نے کہا کہ سائنس و ٹیکنالوجی سے متعلقہ مہاشیں دنیا کو ایجادات، مصنوعات، پرائیکٹس سے روشناس کرائی اور صنعتی اداروں کو ان کے مسائل کا حل بتاتی ہیں۔ یہ نمائش صنعتی ماہرین اور محققین کو اس قابل بناتی ہیں کہ وہ سائنس و ٹیکنالوجی سے متعلقہ مسائل اور ان کے حل پر مہم چلا کر کوڑ کر سکیں۔ انہوں نے کہا کہ پاکستان کی معیشت کا دار و مدار زراعت پر ہے۔ بہت سے ترقی پذیر ممالک کی طرح پاکستان کو بھی کم زرعی پیداوار جیسے مسئلے کا سامنا ہے باوجود اس کے کہ پاکستان بہتری موسموں، زرخیز زمین اور آبپاشی کے نظام جیسی نعمتوں سے مالا مال ہے۔ انہوں نے کہا کہ کئی ضروریات پورا کرنے کیلئے زرعی پیداوار میں اضافہ ناگزیر ہے جبکہ اضافی پیداوار برآمد کر کے قیمتی زرماں کمایا جاسکتا ہے۔ اس موقع پر جیمبر کے سیکرٹری نائب صدر شیخ محمد ارشد نے کہا کہ خودک و زراعت کے شعبے میں تحقیق کے فروغ سے زرعی پیداوار میں اضافہ ہوگا، زرعی شعبے کے مسائل حل ہونگے، روزگار کے نئے مواقع پیدا ہونگے اور ملک ترقی کرے گا لہذا اس جانب فوری توجہ کی اشد ضرورت ہے۔ انہوں نے کہا کہ متحدہ ڈیٹا کے فقدان کی وجہ سے پاکستان اپنے بہت سے شعبوں میں موجود پوٹینشل سے فائدہ نہیں اٹھا سکا جو لوہو نگر ہے۔ حکومت کو چاہیے کہ تحقیق و ترقی کیلئے زیادہ سے زیادہ فنڈز مختص کرے۔ جیمبر میں پاکستان سائنس فاؤنڈیشن ڈائریکٹر منظور ایچ سومرو اور چیف ایگزیکٹو آفیسر انجینیئر ٹیٹو آف ریسرچ پروموشن عابد ایچ کے شیروانی نے تحقیق کی اہمیت پر روشنی ڈالی اور ریسرچ کے موجودہ پرائیکٹس کے بارے میں تفصیلی بریفنگ دی۔ اجلاس سے ڈائریکٹر انسٹی ٹیوٹ ڈائریکٹر اختر، پروفیسر فرید ایس ملک، ڈائریکٹر مارک علی، آصف شریف، ڈائریکٹر عبداللہ ملک، جسٹس سید اور ڈائریکٹر شاد رضا نے بھی خطاب کیا۔ سیمینار کے اختتام پر میر چیکیز خان جمالی اور شیخ محمد ارشد نے فرسٹ ٹیکنالوجی نمائش کا افتتاح کیا۔

SEMINAR at KCCI, Karachi on 27-06-2011



کراچی: ایم اے ان منجھت و تہارت میں مستعدہ سیمینار کے موقع پر پاکستان سائنس فاؤنڈیشن کے چیئرمین ڈاکٹر منظور حسین مہر و سماجی و قاتی وزیر اور ممتاز سائنسدان ڈاکٹر عطاء الرحمن کو شیلڈ پیش کر رہے ہیں۔ مابداج شہر وانی، جنیدا ساسمیل اور ڈاکٹر قاسمی احمد کمال بھی موجود ہیں

روزنامہ دنیا نٹ کراچی (3) جون 2011ء



ڈاکٹر بریزنٹ کراچی جنیدا ساسمیل کدا پر ڈسٹر ڈاکٹر عطاء الرحمن کو شیلڈ پیش کر رہے ہیں



KARACHI: Prof Dr Atta-ur-Rehman addressing a seminar on 'Indigenous Commercialisation Potential of Academic Research' organised by Karachi Chamber of Commerce and Industry, here on Monday.—Recorder photo

روزنامہ "آئی بزنس ریکارڈر" 28 جون 2011ء



کراچی: اب سید کاظم گجر چیئرمین اور ڈاکٹر حفصہ انیس کوٹلیہ چیئر پرسن ہیں۔

V. AUDITORS REPORTS

1.0 PAKISTAN SCIENCE FOUNDATION
Financial Statements
JUNE 30th 2011

ANWAR AHMED KHAN
Chartered Accountant
207, Bank Road, Rawalpindi
Tel: 8055493, 8060222
Fax: 8055493
Email: anwar@anwar.net

AUDITORS' REPORT TO THE MEMBERS

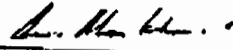
We have audited the attached balance sheet of **PAKISTAN SCIENCE FOUNDATION** as at June 30, 2011 and the related income and expenditure account and cash flow statement together with notes forming part thereof thereon (referred to as the financial statements) for the year then ended, and we state that we have obtained all the information and documents which to the best of our knowledge and belief were necessary for the purposes of our audit.

In the course of carrying out the audit, we have obtained an understanding of the internal control system of the entity and we have designed our audit procedures to obtain reasonable assurance that the financial statements are free from material misstatement. The responsibility for the preparation and presentation of the financial statements is upon the management.

We have also carried out procedures with the existing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting policies used and the significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audit provides a reasonable basis for our opinion and that the conclusions are justified.

In our opinion, based on the audit of the information and evidence available to the accountants given to us, these financial statements give a true and fair view of the financial position and performance of the **PAKISTAN SCIENCE FOUNDATION** as at June 30, 2011 and of its cash flows for the year then ended in accordance with the accounting standards as applicable in Pakistan.

ANWAR AHMED KHAN



Anwar Ahmed Khan & Co.
Chartered Accountants
207, Bank Road, Rawalpindi

**PAKISTAN SCIENCE FOUNDATION
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2011**

	2010	2011 (Rupees)	2010 (Rupees)
INCOME			
Donation received from public		145,085,000	170,000,000
EXPENDITURES			
Operating expenditure	12	(16,514,306)	(16,346,000)
Administrative expenses	11	(75,122,701)	(69,000,000)
		(147,637,007)	(145,346,000)
Surplus (deficit) for the year		(1,552,007)	24,654,000

The enclosed table shows the financial statement for the year ended June 30, 2011.

Chairman


 TRUSTEE
RIAZUL ISLAM
 Member Finance
 Pakistan Science Foundation
 Ministry of Science & Technology
 Islamabad


 CHAIRMAN

**PAKISTAN SCIENCE FOUNDATION
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2011**

	2011 (Rupees)	2010 (Rupees)
CASH FLOW FROM OPERATING ACTIVITIES		
Profit for the year	(1,922,967)	1,621,000
Adjustments for non-cash charges:		
Depreciation	75,602	
Amortisation	4,251,395	3,117,000
Increase/decrease in working capital changes	<u>2,774,331</u>	<u>1,920,000</u>
Working capital changes		
Increase/Decrease in current assets:		
Inventories	(354,557)	14,000
Increase/Decrease in current liabilities:		
Net working capital changes	<u>(354,557)</u>	<u>14,000</u>
Net cash generated from operating activities	<u>2,399,774</u>	<u>3,545,000</u>
CASH FLOW FROM INVESTING ACTIVITIES		
Property, Plant and Equipment	(1,24,034)	27,210,139
Intangible Assets	(750,000)	-
Capital work in progress	750,000	(22,000,000)
Long term deposits	37,339	-
Net cash used in investing activities	<u>(196,694)</u>	<u>15,210,139</u>
CASH FLOW FROM FINANCING ACTIVITIES		
Development grants	(2,489,756)	(4,117,500)
Finance	(750,304)	1,000,000
ECG Science Foundation Ltd	373	-
Mobilisation funds	(1,72,107)	(1,72,107)
Net cash used in financing activities	<u>(2,901,874)</u>	<u>(3,889,607)</u>
NET DECREASE IN CASH AND CASH EQUIVALENTS	<u>(1637,564)</u>	<u>(114,207)</u>
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	<u>1,344,067</u>	<u>1,458,274</u>
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	<u>176,503</u>	<u>1,344,067</u>

The prepared cash flow statement is an integration of the following statements:

Signature:



RIAZUL ISLAM
 Member Finance
 Pakistan Science Foundation
 Ministry of Science & Technology
 Islamabad



 Chairman

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2011

1. THE FOUNDATION AND ITS OPERATIONS

Pakistan Science Foundation is a statutory body established under the Pakistan Science Foundation Act, 1973 on February 02, 1973. The main objective is to conduct and promote scientific research and activities in the field of science and technology.

2. SIGNIFICANT ACCOUNTING POLICIES

The principal accounting policies which have been adopted in the preparation of these financial statements are summarized as under:

2.1 ACCOUNTING CONVENTION

The financial statements have been prepared under the accrual basis of accounting.

2.2 BASIS OF PREPARATION

These financial statements have been prepared in accordance with approved accounting standards as applicable in Pakistan. Approved Accounting standards comprise of Accounting and Financial Reporting Standards for Small-Sized Entities (ASBE) issued by Institute of Chartered Accountants of Pakistan, the provisions of which have been issued under the Companies Ordinance, 1984. It also refers to the accounting practices and decisions of the Companies Ordinance, 1984 and precedents.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost less accumulated depreciation except leased land which is stated at fair value. Depreciation is charged on reducing balance method of written down value depending upon the class of property, plant and equipment. For lease depreciation is charged on straight line method over the useful life of the asset during the term.

Repairs and maintenance are charged to income as and when incurred. Major repairs and improvements are capitalized. Depreciation of property, plant and equipment is over the useful life of the asset as follows:

2.4 INTANGIBLE ASSETS

These are stated at cost less accumulated amortization. Amortization is provided on straight line method for the useful life of the intangible asset of 10 years or less, depending upon the nature of the asset as follows:

		2011 (Rupees)	2010 (Rupees)
3 GENERAL FUND			
Opening balance		25,673,516	24,448,007
Surplus / deficit for the year		<u>(1,552,067)</u>	<u>1,424,811</u>
		<u>24,321,451</u>	<u>25,872,818</u>
4. DEVELOPMENT FUND			
Opening balance		14,156,366	15,349,865
Grants received during the year	4.1	<u>1,120,000</u>	<u>4,131,970</u>
		<u>15,276,366</u>	<u>19,481,835</u>
Expenditure incurred during the year	4.2	<u>(3,619,756)</u>	<u>(5,321,510)</u>
		<u>11,656,610</u>	<u>14,160,325</u>
REPRESENTED BY:			
Property, plant and equipment		11,017,514	12,291,117
Intangibles		675,000	
Capital work-in-progress - PSF software		-	150,000
Cash at banks		50,120	268,203
Prior year adjustment		<u>(36,024)</u>	<u>(98,024)</u>
		<u>11,656,610</u>	<u>14,158,303</u>
4.1 GRANTS RECEIVED DURING THE YEAR			
Participation of scientists and technologists in conferences		1,120,000	1,610,000
Automation of PSF research support program and other activities		-	2,521,970
		<u>1,120,000</u>	<u>4,131,970</u>
4.2 EXPENDITURE INCURRED DURING THE YEAR			
Participation of scientists and technologists in conferences			
T.A., D.A. and evaluation fee		509,655	772,861
Registration fee		68,179	181,070
Postage and stationery		7,542	32,619
Deputation	7.1	2,186,643	2,389,075
Amortization	8	75,000	
Staff salary		120,000	487,057
Miscellaneous		64,330	6,400
Refund to Government		236,113	-
Living expenses		308,294	101,331
		<u>3,619,756</u>	<u>4,498,878</u>
Automation of PSF research support program and other activities			
Postage and stationery		-	37,300
Staff salary		-	542,406
Miscellaneous		-	304,321
		<u>-</u>	<u>884,027</u>
		<u>3,619,756</u>	<u>5,321,510</u>

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	2011 (Rupees)	2010 (Rupees)
5. FAIR FUND		
Opening balance	258,763	247,111
Profit/loss during the year	9,887	1,115
Transfer to Miscellaneous funds	(253,621)	
	<u>4,579</u>	<u>28,226</u>
REPRESENTED BY:		
Capital work	<u>4,579</u>	<u>28,226</u>
6. MISCELLANEOUS FUNDS		
Opening balance		
Endowment	<u>275,187</u>	<u>256,606</u>
UNESCO	<u>454,844</u>	<u>620,791</u>
	<u>730,031</u>	<u>877,407</u>
Grants received during the year		
Endowment	<u>254,476</u>	<u>21,314</u>
UNESCO	<u>182,000</u>	<u>144,000</u>
	<u>436,476</u>	<u>165,314</u>
Expenses incurred during the year		
Endowment	<u>(1,334)</u>	<u>(1,749)</u>
UNESCO	<u>(511,252)</u>	<u>(1,000,240)</u>
	<u>(512,586)</u>	<u>(1,001,989)</u>
Closing balance		
Endowment	<u>532,329</u>	<u>276,161</u>
UNESCO	<u>1,195</u>	<u>420,551</u>
	<u>533,524</u>	<u>696,712</u>
REPRESENTED BY:		
Government	<u>533,524</u>	<u>696,712</u>

7. PROPERTY, PLANT AND EQUIPMENT

Particulars	2011		2010		2009		2008	
	Cost	Accumulated Depreciation	Cost	Accumulated Depreciation	Cost	Accumulated Depreciation	Cost	Accumulated Depreciation
Land	1,000.00		1,000.00		1,000.00		1,000.00	
Buildings	10,000.00	2,000.00	10,000.00	2,000.00	10,000.00	2,000.00	10,000.00	2,000.00
Plant and machinery	5,000.00	1,000.00	5,000.00	1,000.00	5,000.00	1,000.00	5,000.00	1,000.00
Motor vehicles	2,000.00	500.00	2,000.00	500.00	2,000.00	500.00	2,000.00	500.00
Office equipment	1,000.00	200.00	1,000.00	200.00	1,000.00	200.00	1,000.00	200.00
Other assets	1,000.00	200.00	1,000.00	200.00	1,000.00	200.00	1,000.00	200.00
Total	21,000.00	3,900.00	21,000.00	3,900.00	21,000.00	3,900.00	21,000.00	3,900.00

PARTICULARS	2011		2010	
	As at July 1, 2011	As at July 1, 2010	As at July 1, 2010	As at July 1, 2009
PRELIMINARY RESULTS				
Materials	14,400	14,400	14,400	14,400
Wages	14,400	14,400	14,400	14,400
Overhead	14,400	14,400	14,400	14,400
2011 Total	43,200	43,200	43,200	43,200
2010 Total	43,200	43,200	43,200	43,200

	2011 (Rupees)	2010 (Rupees)
7. DEPRECIATION ALLOCATION		
Development projects	2,156,643	2,058,770
Administrative expenses	7,064,755	7,048,770
	<u>4,221,398</u>	<u>9,107,540</u>

2. INTANGIBLE ASSETS

PARTICULARS	COST		R A T E	AMORTIZATION		R A T E
	As at July 1, 2011	As at July 1, 2010		As at July 1, 2010	As at July 1, 2009	
2011 Total	182,160	182,160		18,216	18,216	
2010 Total	182,160	182,160		18,216	18,216	

9. LONG TERM SECURITY DEPOSITS

	2011 (Rupees)	2010 (Rupees)
Bank deposits	1,472,166	1,472,166
Life	145,000	145,000
2011 Total	<u>1,617,166</u>	<u>1,617,166</u>

10. RESEARCH PROJECTS IN PROGRESS

	2011 (Rupees)	2010 (Rupees)
Company balance	119,454,272	30,901,141
As at 1st April 2011 during the year	55,339,575	52,175,141
	<u>164,793,847</u>	<u>83,076,282</u>
Less: Projects completed during the year	(17,296,455)	(5,725,712)
Expense Accruals	(11,277,264)	(2,125,712)
	<u>136,220,128</u>	<u>75,224,858</u>



	2011 (Rupees)	2010 (Rupees)
10.1 DISBURSEMENTS DURING THE YEAR		
Investment in equity	9,405,133	5,711,111
Dividends received	3,323,750	5,111,111
Dividends paid	418,503	4,400,000
Financial expenses	2,520,541	1,700,000
Income tax expense	5,545,542	1,740,000
Dividend income	5,353,086	5,470,000
Dividend income	1,774,058	1,780,000
Share of profit/losses	2,573,344	2,700,000
Engineering projects	2,442,181	100,000
Administrative expenses	4,565,264	1,100,000
Marketing expenses	1,738,442	1,000,000
Finance Committee meeting	1,241,649	150,000
Other miscellaneous expenses for 2011 and 2010	2,110,500	1,440,000
	<u>50,939,873</u>	<u>20,170,000</u>
10.2 PROJECTS COMPLETED DURING THE YEAR		
Support services	5,491,065	-
Agriculture services	-	1,118,000
Information systems	902,657	2,750,000
Engineering	1,473,968	-
Law and compliance	-	200,000
Finance services	-	1,600,000
Corporate services	3,757,521	1,140,000
Other miscellaneous expenses for 2011 and 2010	6,081,514	-
	<u>17,206,655</u>	<u>5,708,000</u>
10.3 EXPENSES FOR PROJECTS		
Investment in equity	8,485,133	5,711,111
Share of profit/losses	1,341,649	5,711,111
Administrative	438,500	5,111,111
	<u>10,265,282</u>	<u>16,533,333</u>
11. ADVANCES		
Administrative	794,862	400,000
Finance	232	1,111,111
	<u>795,094</u>	<u>1,511,111</u>
12. CASH AND BANK BALANCES		
Cash in hand	34,415	100,000
Bank balances	122,621	1,111,111
Current accounts	955,417	5,711,111
Fixed deposits	708,625	1,111,111
	<u>1,821,078</u>	<u>8,033,333</u>

2011		2010	
(Revenue)		(Revenue)	
13 STATISTICAL SCIENTIFIC FUNCTIONS			
Personnel (including overtime)	1,430,158	1,430,158	
Contractual services (including printing and reproduction)	1,767,800	1,767,800	
Travel (including per diem and mileage)	2,036,685	2,036,685	
Computer services (including software)	3,127,147	3,127,147	
Telephone (including cellular)	4,159,128	4,159,128	
Printing	179,223	179,223	
Supplies (including postage)	1,619,774	1,619,774	
Materials and supplies	2,912,005	2,912,005	
Professional fees (including consulting)	1,175,000	1,175,000	
Printing and reproduction (including postage)	104,051	104,051	
Other (including postage)	135,957	135,957	
63,614,786	63,614,786		
14 ADMINISTRATIVE EXPENSES			
Subscriptions (including periodicals)	56,706,728	56,706,728	
Travel (including per diem and mileage)	369,779	369,779	
Telephone (including cellular)	8,056,204	8,056,204	
Printing and reproduction (including postage)	128,478	128,478	
Supplies (including postage)	1,057,505	1,057,505	
Professional fees (including consulting)	1,527,581	1,527,581	
Printing and reproduction (including postage)	151,313	151,313	
Other (including postage)	1,308,008	1,308,008	
Materials and supplies	60,128	60,128	
Personnel (including overtime)	109,407	109,407	
Telephone (including cellular)	257,532	257,532	
Printing and reproduction (including postage)	1,423,754	1,423,754	
Supplies (including postage)	82,000	82,000	
Materials and supplies	600,000	600,000	
Printing and reproduction (including postage)	227,574	227,574	
Other (including postage)	153,459	153,459	
Personnel (including overtime)	1,000,000	1,000,000	
Telephone (including cellular)	2,056,751	2,056,751	
78,122,701	78,122,701		
DATE OF AUTHORIZATION FOR ISSUE			

16 FIGURES

All three financial statements figures have been marked as 'to be reviewed' in the audit of the previous year. Certain irregularities, if any, should be investigated and necessary corrective actions taken.

Figure 3.




RIAZUL ISLAM
Member Director
Pakistan Science Foundation
Ministry of Science & Technology
Islamabad

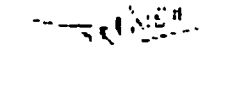
**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2011**

	2011 Rs 4665	2010 Rs 4665
INCOME		
GRANT FROM FEDERAL GOVERNMENT		
EXPENDITURE		
SURPLUS TRANSFERRED TO GENERAL FUND		

The surplus/deficit of this account is/are shown in the following statement:

continued


 ASSISTANT DIRECTOR

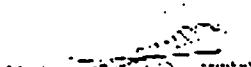

 DIRECTOR GENERAL

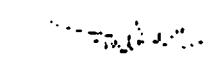
**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2011**

	2011 Rupees	2010 Rupees
CASH FLOWS FROM OPERATING ACTIVITIES		
Contribution towards development charges	-	-
Net cash generated from operations	-	-
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of plant and equipment	-	-
Net cash used in investing activities	-	-
CASH FLOWS FROM FINANCING ACTIVITIES		
Grants-in-aid	-	-
Net cash from financing activities	-	-
NET INCREASE IN CASH AND CASH EQUIVALENTS	-	-
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	389	-
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	389	-

The above cash flow statement is prepared in accordance with the accounting standards applicable in Pakistan.

Signature


 CONTROLLER OF ACCOUNTS


 DIRECTOR

**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2011**

1. BACKGROUND AND OBJECTIVE

Pakistan Museum of Natural History (PMNH) is a non-profit organization established in 1974 and is registered under the Societies Registration Act 1860. It is a non-profit organization established in 1974 and is registered under the Societies Registration Act 1860. It is a non-profit organization established in 1974 and is registered under the Societies Registration Act 1860.

2. SIGNIFICANT ACCOUNTING POLICIES

The financial statements have been prepared using the accounting policies set out below.

2.1 ACCOUNTING CONVENTION

These financial statements have been prepared using the accrual accounting convention.

2.2 BASIS OF PREPARATION

The financial statements have been prepared on a cash basis of accounting.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are recorded at cost less accumulated depreciation.

	2011 Rupees I	2010 Rupees I
3 GENERAL FUND		
Opening balance	132,747,138	132,747,138
Transfer to government of Pakistan	-	-
Expenses for the year	-	-
	<u>132,747,138</u>	<u>132,747,138</u>

4 PAKISTAN SCIENCE FOUNDATION GRANT

This represents the grant from the Pakistan Science Foundation for the year ended June 30, 2011.

5 JAPANESE GRANT

This represents the grant from the Japanese Government for the year ended June 30, 2011.

6 PROPERTY, PLANT AND EQUIPMENT

DESCRIPTION	2017	2016
Buildings	1,234,567	1,123,456
Leasehold improvements	567,890	456,789
Equipment	345,678	234,567
Accumulated depreciation	(1,234,567)	(1,123,456)
Net book value	913,568	687,345
2017 - Budget	1,456,789	1,456,789
2016 - Budget	1,234,567	1,234,567

7. CASH AND BANK BALANCES

The accompanying schedule of deposits related to the accounts and amounts deposited is included as an exhibit to this report.

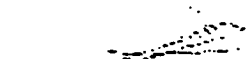
8. DATE OF AUTHORIZATION FOR ISSUE

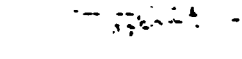
This financial statements have been authorized for issue by the Board of Directors on the date of the meeting.

9. FIGURES

All financial statements figures have been rounded off to the nearest dollar and the figures may not necessarily add due to rounding.

Approved:


ASB


DIRECTOR

Amin Ali Khan & Co.
Chartered Accountants

557, Bano Road, Rawalpindi

Tele: 3473422, 3342256

Fax: 3377354

E-mail: amin@aminai.com

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the annual balance sheet of Non-development account of Pakistan Museum of Natural History (PMNH) as at June 30, 2011, the related income and expenditure account and cash flow statement together with the notes forming part thereof, hereinafter referred to as financial statements for the year then ended and we state that we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

It is the responsibility of the management to establish and maintain a system of internal control, and prepare and present the above said financial statements in conformity with the approved accounting standards as applicable in Pakistan. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the auditing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the above said statements are free of any material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the above said statements. An audit also includes assessing the accounting policies and significant estimates made by management, as well as evaluating the overall presentation of the above said financial statements. We believe that our audit provides a reasonable basis for our opinion and after due verification, we report that:

The fixed assets has not changed description or property, plant and equipment which is a continuation with the one mentioned in IAS-16 Property, plant and equipment.

In our opinion, and to the best of our information and according to the explanation given to us except for above, these financial statements give the information as required and present fairly and materially, the financial position of the Non-development account of Pakistan Museum of Natural History (PMNH) as at June 30, 2011 and of its surplus and cash flow for the year then ended in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi
February 09, 2012



(Amin Ali Khan & Co.)

Chartered Accountant


557, Bano Road, F-7/2

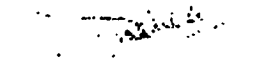
**PAKISTAN MUSEUM OF NATURAL HISTORY
NON-BEVELOPMENT ACCOUNT
STATEMENT OF FINANCIAL POSITION AS AT JUNE 30, 2011**

	2011 (Rupees)	2010 (Rupees)
FUNDS		
Grants-in-aid	12,738,658	12,738,658
NON-CURRENT ASSETS		
Property, plant and equipment	12,400,650	12,400,650
Long-term deposits (FDRs)	250,000	250,000
	12,738,658	12,738,658
CURRENT ASSETS		
Advances	12,738,658	12,738,658

The annexed notes form an integral part of these financial statements.

APPROVED:


 DIRECTOR GENERAL


 DIRECTOR GENERAL

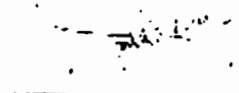
PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED JUNE 30, 2011

	2011 (Rupees)	2010 (Rupees)
INCOME		
GRANT FROM FEDERAL GOVERNMENT	57,923,837	11,711,111
EXPENDITURE	16,785,059	10,143,041
SURPLUS TRANSFERRED TO GENERAL FUND	<u>41,138,778</u>	<u>1,568,070</u>

The surplus transferred to the General Fund is an integral part of the income statement.

APPROVED BY


 ASSISTANT DIRECTOR


 DIRECTOR

**PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2011**

	2011 Rupees,	2010 Rupees,
CASH FLOWS FROM OPERATING ACTIVITIES		
Surplus (deficit) before non-current liabilities	130,575	1,05,000
Working capital changes:		
(Increase)/ Decrease in current assets		
- Inventories	4,345	
Increase/ (Decrease) in current liabilities:		
(a) Working Capital (W.C.)	4,345	
Net cash generated from operating activities	<u>142,925</u>	<u>1,05,000</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Property plant and equipment	(136,575)	(1,07,000)
Net cash used in investing activities	<u>(136,575)</u>	<u>(1,07,000)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Government	(430,048)	20,000
Proceeds from sale of property, plant and equipment		
Net cash used in from financing activities	<u>(430,048)</u>	<u>20,000</u>
NET INCREASE IN CASH AND CASH EQUIVALENTS	(423,700)	18,000
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	10,000	10,000
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	(399,700)	28,000

The annual accounts of the account are prepared on the basis of the following statements:

Signature

DIRECTOR OF MUSEUMS

DIRECTOR OF MUSEUMS

PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2011

1. BACKGROUND AND OBJECTIVE

Pakistan Museum of Natural History, Faisalabad is a Government of Punjab institution established in 1972. It is an independent organization established under the provisions of the Government of Punjab, Faisalabad. It is a non-profit organization and its primary objective is to promote and preserve the natural history of Pakistan.

2. SIGNIFICANT ACCOUNTING POLICIES

The historical accounting records which have been accounted in the past are of the Government of Punjab and are not subject to audit.

2.1 ACCOUNTING CONVENTION

The financial statements have been prepared on a cash basis.

2.2 BASIS OF PREPARATION

These financial statements have been prepared under the historical cost method of accounting.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are valued at cost less accumulated depreciation.

	2011 (Rupees)	2010 (Rupees)
3. GENERAL FUND		
Opening Balance	13,030,122	1,510,413
Transfer to Government of Punjab	(439,648)	
Current Income	138,578	1,271,111
	12,738,652	2,781,524

4. PROPERTY, PLANT AND EQUIPMENT

	2011	2010
Land	1,000,000	1,000,000
Buildings	1,000,000	1,000,000
Plant and Equipment	1,000,000	1,000,000
Accumulated Depreciation	(1,000,000)	(1,000,000)
Total	2,000,000	2,000,000

Amit A. Jm Khan & Co
Chartered Accountants
55-A, Bera Road, Ramdipura
Lahore 546403 Pakistan
Fax: 5517358
E-mail: aak@amitaf.com

AUDITORS' REPORT TO THE BOARD OF TRUSTEES


We have audited the proposed receipt and payment account of Miscellaneous funds (JUBL Account # CD-70) Pakistan Museum of Natural History (PMNH) for the year ended as at June 30, 2013 and we state that we have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

It is the responsibility of the management to establish and maintain a system of internal control and prepare and present the above said receipt and payment account in conformity with the approved accounting standards as applicable in Pakistan. Our responsibility is to express an opinion on this receipt and payment account based on our audit.

We conducted our audit in accordance with the auditing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the above said receipt and payment account is free of any material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the above said receipt and payment account. An audit also includes assessing the accounting policies and significant estimates made by management, as well as evaluating the overall presentation of the above said receipt and payment account. We believe that our audit provides a reasonable basis for our opinion and, therefore, we report that:

in our opinion, and to the best of our information and according to the explanation given to us, the receipt and payment account give the information as required and presented fairly in all material respects the receipts and payments of the Miscellaneous funds (JUBL Account # CD-70) Pakistan Museum of Natural History (PMNH) during the year ended as at June 30, 2013, in accordance with the proposed accounting standards as applicable in Pakistan.

Rawalpindi,
February 05, 2013


Amit A. Jm Khan & Co.
Chartered Accountants
111-A, Ferozpur Road

**PAKISTAN MUSEUM OF NATURAL HISTORY
MISCELLANEOUS FUNDS (UBL ACCOUNT # CD-70)
RECEIPT AND PAYMENT ACCOUNT FOR THE YEAR ENDED JUNE 30, 2011**

	2011 RUPEES	2010 RUPEES
OPENING BALANCE - CASH AT BANK	405,369	1,000
RECEIPTS		
Miscellaneous	1,544,508	1,000
	1,950,577	2,000
PAYMENTS		
Miscellaneous	1,291,150	1,000
	1,291,150	2,000
CLOSING BALANCE - CASH AT BANK	659,427	2,000

Prepared by:

DIRECTOR GENERAL

DIRECTOR GENERAL

F. NO. 100-100000-1000-1000
STATEMENT OF MISCELLANEOUS FUNDS (JBA ACCOUNT # CO-70) RECEIPT AND EXPENDITURES
FOR THE YEAR ENDED JUNE 30, 2011

GENERAL BALANCE
 \$ 1,000
 \$ 1,000

EXPENDITURES
 \$ 1,000
 \$ 1,000

GENERAL BALANCE
 \$ 1,000
 \$ 1,000

STATE OF NEW YORK
 DEPARTMENT OF TAXATION AND FINANCE
 OFFICE OF THE COMPTROLLER

**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
BALANCE SHEET AS AT JUNE 30 2011**

	2011 (Rupees)	2010 (Rupees)
FUNDS AND GRANTS		
Government	132,747,138	1,000,000
Private/Trustee/Donation/Other	200,000	200,000
Other (Bank/Grant)	15,719,500	1,000,000
	148,666,638	2,000,000
NON-CURRENT ASSETS		
Property, plant and equipment	148,666,638	1,000,000
CURRENT ASSETS		
Cash and bank balance	335	200,000
	148,666,638	1,200,000

The above statement is true to the best of my knowledge and belief.

Witnessed

ASSISTANT DIRECTOR

CHIEF ACCOUNTANT

**3.0 PAKISTAN SCIENTIFIC & TECHNOLOGICAL INFORMATION CENTRE
Financial Statements
JUNE 30th 2011**

Amir Ajan Khan & Co.
Chartered Accountants
17, Main Road, Faisalabad
Tel: 3722222, 3722223
Fax: 3722224
E-mail: amir@amirajankhancpa.com

AUDITORS REPORT TO THE BOARD OF TRUSTEES


We have audited the financial statements (receipts and payment account) of Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC) for the year ended June 30, 2011, and we state that we have received all the information and explanations which in our opinion are necessary for the purposes of our audit.

It is the responsibility of the management to establish and maintain a system of accounting that will ensure and present the financial statements and payment account in conformity with the applicable accounting standards as applicable in Pakistan. Our responsibility is to express an opinion on the receipt and payment account based on our audit.

We conducted our audit in accordance with the auditing standards as applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements and payment account are free of any material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the receipt and payment account. It also includes assessing the accounting controls and significant estimates made by management, as well as evaluating the overall presentation of the receipt and payment account. We believe that our audit provides a reasonable basis for our opinion and that we are free from any bias.

In our opinion, and in the absence of any information and explanation to the contrary, the receipt and payment account appearing in the financial statements and payment account of the Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC) for the year ending at June 30, 2011, is consistent with the information contained in the receipt and payment account.

Amir Ajan Khan


Amir Ajan Khan & Co.
Chartered Accountants
17, Main Road, Faisalabad

Amir Alam Khan & Co.
Chartered Accountants
55/1, B-6 Road, Rawalpindi
Tel: 3719811, 3719206
Fax: 3719155
E-Mail: amir@amir.com.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the annexed books of account and balance account of **Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC)** for the year ended on 30 June 2011, in accordance with the terms of the Mandate of the Auditor, with the particulars of which the Board of Trustees are conversant, and on the basis of the necessity for the purposes of our audit.

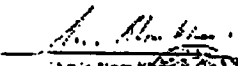
It is the responsibility of the management to establish and maintain a system of accounting, to keep proper records and present the books and records and payment account in conformity with the accepted accounting standards as applicable in Pakistan. Our responsibility is to express an opinion on the receipt and payment account based on our audit.

We conducted our audit in accordance with the auditing standards in force in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether, in all material aspects, the receipt and payment account is free of material misstatement. An audit in accordance with these standards does not guarantee that we will detect all misstatements. Misstatements may arise due to errors or fraud. We also conducted the amounts and disclosures in the above said receipt and payment account. We audit also include assessing the accounting policies and significant estimates made by management, as well as, evaluating the overall presentation of the above said receipt and payment account. We believe that our audit provides a reasonable basis for our opinion and other due reliance on the account.

In our opinion, and to the best of our information and according to the explanatory given in the receipt and payment account give the information as required and presented therein, the above said receipt and payment of the **Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC)** for the year ended on 30 June 2011, in accordance with the accepted accounting standards, is appropriate. (Favorable)

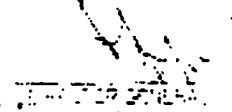
Rawalpindi

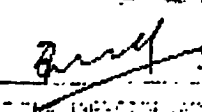
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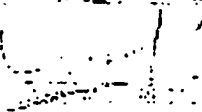

Amir Alam Khan & Co.
Chartered Accountants
55/1, B-6 Road, Rawalpindi

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (NON DEVELOPMENT)
FOR THE YEAR ENDED JUNE 30, 2011**

	2011 RUPEES	2010 RUPEES
RECEIPTS		
Government grants	71,522,000	57,000,000
	<u>71,522,000</u>	<u>57,000,000</u>
PAYMENTS		
Salaries and allowances	38,500,134	25,447,645
House rent (Residential)	8,136,650	1,391,640
Fuel, electricity and communication bills	1,028,367	72,654
Newspaper, books/journals	665,354	107,000
Entertainment	83,934	67,305
Postage, telegrams, internet and telephone	1,046,171	211,111
Electricity, water and gas	971,213	704,200
Vehicle running/PTOL charges	504,879	845,000
Traveling Allowance (TAA)	253,354	215,400
Medical Facility	1,316,299	1,015,110
Advertisement	55,670	142,000
Repair and maintenance office equipment	355,261	41,171
Repair and maintenance transport	381,549	345,511
Telex and maintenance telegraph & faxes	78,610	11,000
Repair and maintenance building	2,240,512	604,575
Computer expenses (hardware, software, IT Solutions & Database Solutions)	1,780,475	107,000
Staff welfare funds & allowances	610,065	410,000
Conferences, seminar & workshops	1,676,255	500,000
Audit fee	20,000	20,000
Pen. Office Station	342,000	342,000
Purchase of transport	-	1,517,000
Purchase of land and machinery	-	1,470,000
Purchase of furniture & fixtures	42,004	50,000
Advance motor cycle	510,000	-
Transportation bills and annual subscription	1,919,004	1,000,000
Interest on loan (10%)	483,630	-
Personnel contract	1,079,054	1,112,000
Foreign travel expenses	-	600,000
Medical services & consultants	272,176	100,000
	<u>1,662,300</u>	<u>1,000,000</u>
EXCESS OF RECEIPTS OVER PAYMENTS	<u>45,210,000</u>	<u>46,000,000</u>


Or. Khalil Ahmed Ihsan
 Director General, PASTIC
 Quaid-Azam University Campus
 Islamabad


Malik Naeem Mehmood
 Additional Director (Admin)
 Pakistan National Centre
 Islamabad


Ghani Ahmad
 Assistant Director (Admin)
 PASTIC Quaid-Azam University Campus
 Islamabad

**FEDERAL BUREAU OF INVESTIGATION CENTER
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNTING STATEMENT
FOR THE YEAR ENDED JUNE 30, 1964**

	RECEIPTS	EXPENSES	CHANGES IN DEFERRED RECEIPTS	CHANGES IN DEFERRED PAYMENTS	NET RECEIPTS	NET PAYMENTS	NET RECEIPTS	NET PAYMENTS
RECEIPTS								
Operating Receipts	1,000,000				1,000,000			
Non-Operating Receipts	1,000,000				1,000,000			
PAYMENTS								
Operating Payments		1,000,000				1,000,000		
Non-Operating Payments		1,000,000				1,000,000		
NET RECEIPTS								
Operating					1,000,000			
Non-Operating					1,000,000			
NET PAYMENTS								
Operating						1,000,000		
Non-Operating						1,000,000		


PAKISTAN SCIENTIFIC RESEARCH BOARD, MIGRATION CENTER
 COMPO. BATES RECEIPTS AND PAYMENTS ACCOUNT, ACCOUNT NO. 10000000000000000000
 FOR THE YEAR ENDED JUNE 30, 2011

DATE	DESCRIPTION	AMOUNT	CHECK NO.	CHECK DATE	REMARKS	DATE	AMOUNT	CHECK NO.	CHECK DATE	REMARKS

Prepared by:
 [Signature]
 Date: 04-10-11

04-10-11


Dr. Khalid Ahmed Iqbal
 Director General, PAFIC
 Quaid-e-Azam University Campus
 Islamabad


MALIK KHALID MAHMOOD
 Additional Director (Admin)
 PAFIC National Centre
 Islamabad


CHAFFAR AHMAD
 Assistant Director (Accounts)
 PAFIC National Centre
 Quaid-e-Azam
 University Campus, Islamabad

Amir Alam Khan & Co
Chartered Accountants
101, 102, 103, 104, 105
106, 107, 108, 109
110, 111, 112, 113
E-mail: aak@paknet.com.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the financial statements for the year ended 30 June 2011 of **Reprographic and documentation account of Pakistan Scientific and Technological Information Centre (PASTIC)** in the form of an annual return by CPMA and we state that we have conducted an audit in accordance with the standards of the Institute of Chartered Accountants of Pakistan. Our knowledge and belief were necessary for the preparation of the return.

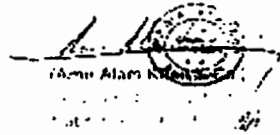
It is the responsibility of the management to establish and maintain a system of internal control and to prepare the above said receipt and payment account in conformity with the approved accounts of the party as available in Pakistan. Our responsibility is to express an opinion on the receipt and payment account based on our audit.

We conducted our audit in accordance with the auditing standards applicable in Pakistan. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the receipt and payment account is free of any material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the above said receipt and payment account. An audit also includes the following: the accounting records and significant estimates made by management; as well as: evaluating the overall presentation of the above said receipt and payment account. We believe that our audit provides a reasonable basis for our opinion and, therefore, our independent verification, we report that:

In our opinion and to the best of our information and according to the explanation given to us, the receipt and payment account given in the return as required and prepared in the material respects the approved accounts of the **Reprographic and documentation account of Pakistan Scientific and Technological Information Centre (PASTIC)** during the year ended as at June 30, 2011 in conformity with the approved accounts of the party as available in Pakistan.

Karachi

03-11-11

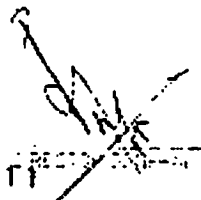

Amir Alam Khan & Co
Chartered Accountants
101, 102, 103, 104, 105
106, 107, 108, 109
110, 111, 112, 113


**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (REPROGRAPHIC AND DOCUMENTATION)
FOR THE YEAR ENDED JUNE 30, 2011**


	2011 RUPEES	2010 RUPEES
OPENING BALANCE		
Cash at bank		
Reprography	3,577,305	2,111,415
Documentation	1,136,467	1,000,000
	4,713,772	3,111,415
RECEIPTS		
Reprography	5,467,156	4,111,415
Documentation	231,730	200,000
Bank on bank account	145,838	111,415
Registered marks charges	170,575	100,000
	6,015,299	4,522,830
PAYMENTS		
Reprography	4,781,147	3,111,415
Documentation charges	30,000	200,000
Bank charges	615	111,415
Transferred to head office	170,575	100,000
	4,902,337	3,522,830
CLOSING BALANCES		
Cash at bank		
Reprography	4,566,152	2,111,415
Documentation	1,307,562	1,000,000
	5,873,714	3,111,415

Verified

04-10-11


Dr. Khalil Ahmed Ishaq
Director General, PASTIC
Quaid Azam University Campus
Islamabad


MALIK KHALID KHAN
Assistant Director (Accounts)
Pestic National Centre
Islamabad


GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid Azam
University Campus, Islamabad

PAKISTAN SCIENCE AND TECHNOLOGICAL INFORMATION SYSTEMS
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (SUMMARY & DOCUMENTATION)
FOR THE YEAR ENDED 31.12.1981

DESCRIPTION	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES	AMOUNT IN RUPEES
OPENING BALANCE								
CASH AT BANK								
Receipts	1,000.00							1,000.00
Payments	(500.00)							(500.00)
ACCEPTED								
Receipts	1,000.00							1,000.00
Payments	(500.00)							(500.00)
PAYMENTS								
Receipts	1,000.00							1,000.00
Payments	(500.00)							(500.00)
CLOSING BALANCE								
Cash at Bank	1,000.00							1,000.00
Accepted	1,000.00							1,000.00
Payments	(500.00)							(500.00)

20-10-11

[Signature]
Mr. Khalid Ahmed Nisoto
 Director General, PASTIC
 Quaid-e-Azam University Campus
 Islamabad

[Signature]
MR. MALIK KHALID MEHMOOD
 Additional Director (Admin)
 Public National Centre
 Islamabad

[Signature]
GHAFFAR AHMAD
 Asst. Dir. Public Accounts
 PASTIC General Centre, Quaid-e-Azam
 Univ. Campus Islamabad

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
 DEVELOPMENT PROJECT-STRENGTHENING & ENHANCEMENT OF RESEARCH & SERVICE UNIT
 RECEIPTS AND PAYMENTS ACCOUNT
 FOR THE YEAR ENDED JUNE 30, 2011**

	2011 RUPEES	AND RUPEES
RECEIPTS		
UNRECORDED RECEIPTS	2,018,000	1,405,553
	<u>2,518,000</u>	<u>1,405,553</u>
PAYMENTS		
Associates of Institute of Management	7,138,000	1,195,720
Formulation of Research & Development	90,000	226,780
Others	2,678,000	1,405,000

EXCESS OF RECEIPTS OVER PAYMENTS

Amounts:

22-10-11

Dr. Khalid Ahmed Razaq
 Director General, PASTIC
 Quaid-e-Azam University Campus
 Islamabad

Dr. Khalid Azeem
 Joint Director (Admin)
 PASTIC National Centre
 Islamabad

CHAFFI S AHMAD
 Assistant Director (Accounts)
 PASTIC National Centre, Quaid-e-Azam
 University Campus, Islamabad

ANNEXURES

Pakistan Science Foundation Act 1973

Reprinted from the Gazette of Pakistan, Extraordinary, February 2, 1973, Part I

Pakistan Science Foundation Act 1973

National Assembly of Pakistan

Islamabad, the 2nd February, 1973

The following Acts of the National Assembly received the assent of the President on the 31st January, 1973, and are hereby published for general information:-

ACT NO. III OF 1973

An Act to provide for the establishment of the Pakistan Science Foundation

WHEREAS it is expedient to provide for the establishment of the Pakistan Science Foundation and for matters ancillary thereto;

It is hereby enacted as follows:-

1. **Short title, extent and commencement.**-(1) This Act may be called the Pakistan Science Foundation Act, 1973.
(2) It extends to the whole of Pakistan.
(3) It shall come into force at once.
2. **Definitions** – In this Act, unless there is anything repugnant in the subject or context.-
 - (a). “Board” means the Board of Trustees of the Foundation;
 - (b). “Chairman” means the Chairman of the Foundation; and
 - (c) “Foundation” means the Pakistan Science Foundation established under this Act.

3. **Establishment of the Foundation.**-- (1) As soon as may be after the commencement of this Act, the Federal Government may, by notification in the official Gazette, establish a Pakistan Science Foundation to promote and finance scientific activities having a bearing on the socio-economic needs of the country.

(2) The Foundation shall be a body corporate by the name of the Pakistan Science Foundation, having perpetual succession and a common seal, with power, subject to the provisions of this Act, to acquire, hold and dispose of property, both movable and immovable, and shall by the said name sue and be sued.

(3) The head office of the Foundation shall be at Islamabad.

4. **Functions of the Foundation.**-(1) The Foundation shall function as a financing agency for –

- (i) the establishment of comprehensive scientific and technological information and dissemination centres;
- (ii) the promotion of basic and fundamental research in the universities and other institutions on scientific problems relevant to the socio-economic development of the country;
- (iii) the utilization of the results of scientific and technological research including pilot plant studies to prove the technical and economic feasibility of processes found to be promising on a laboratory scale;
- (iv) the establishment of science centres, clubs, museums, herbaria and planetaria;
- (v) the promotion of scientific societies, associations and academies engaged in spreading the cause of scientific knowledge in general or in the pursuit of a specific scientific discipline or technology in particular;
- (vi) the organization of periodical science conferences, symposia and seminars;
- (vii) the exchange of visits of scientists and technologists with other countries;
- (viii) the grant of awards, prizes and fellowships to individuals engaged in developing processes, products and inventions of consequence to the economy of the country ; and
- (ix) special scientific surveys not undertaken by any other organization and collection of scientific statistics related to the scientific effort of the country.

(2) The Foundation shall also—

(i)	review the progress of scientific research sponsored by it and evaluate the results of such research;
(ii)	maintain a National Register of highly qualified and talented scientists of Pakistan, including engineers and doctors, in or outside the country and to assist them, in collaboration with the concerned agencies in finding appropriate employment; and
(iii)	establish liaison with similar bodies in other countries.

(3) In the performance of its functions, the Foundation shall be guided on questions of policy by the instructions, if any, given to it by the Federal Government which shall be the sole judge as to whether a question is a question of policy.

5. **Board of Trustees.**- (1) The general direction, conduct and management of the affairs of the Foundation, including administration of its funds, shall vest in a Board of Trustees consisting of the following members, namely:-

Whole-time members

- (i) the Chairman :
- (ii) one eminent scientist;
- (iii) the Director of Finance; to be appointed by the President;

Part-time members

- (iv) the Chairman of the National Science Council;
- (v) four scientists to be nominated by the National Science Council; and
- (vi) eleven eminent scientists to be nominated the President.

(2) The remuneration and other terms and conditions of service of Chairman and the two other whole-time members of the Board shall be such as may be determined by the President.

6. **Chairman of the Foundation.**- (1) The Chairman of the Board shall be the Chairman of the Foundation and shall be appointed from amongst eminent scientists of the country having experience of research and scientific administration

(2) The Chairman shall, subject to sub-section (3), hold office for a term not exceeding three years and shall be eligible for re-appointment.

(3) The President may at any time terminate the appointment of the Chairman without notice and without assigning any reason.

7. **Members of the Board** - (1) The members of the Board, other than the ex-officio member shall, subject to sub-section (3), hold office for a term not exceeding three years and shall be eligible for re-appointment or re-nomination, as the case may be.

(2) A member, other than an ex-officio member, may at any time resign his office by writing under his hand addressed to the President but shall continue to perform his functions until his resignation has been accepted.

(3) The President may at any time terminate the appointment or, as the case may be, nomination of any member of the Board without notice and without assigning any reason

(As amended vide Ordinance No XIII of 1979, published in the Gazette of Pakistan, Extra. Feb. 24, 1979) Part I.

8. **Meetings of the Board.**—(1) The meetings of the Board shall be held at least twice a year and shall be presided over by the Chairman or, in his absence by its whole-time scientist member.

(2) All decisions at a meeting of the Board shall be taken by a majority of the votes of the members present and voting.

9. **Quorum at the meeting of the Board.**—To constitute a quorum at a meeting of the Board not less than nine members shall be present.

10. **Executive Committee.**— There shall be an Executive Committee consisting of the Chairman and the two other whole-time members of the Board.

11. **Delegation of powers.**—The Board may, from time to time, delegates to the Chairman or the Executive Committee such of its powers and functions as it may consider necessary.

12. **Adhoc Committees.**—The Foundation may set up ad hoc committees consisting of university professors and other leading scientists and experts to scrutinize applications for financial assistance for carrying out scientific research submitted to the Foundation by the universities or other institutions or by individual scientific workers or groups of scientific workers and to review and evaluate the results of research sponsored by the Foundation.

13. **Funds.**—The funds of the Foundation shall consist of—

- (a) grants made by the Federal Government and the Provincial Government
- (b) donations and endowments; and
- (c) income from other sources.

14. **Budget.**—The Foundation shall cause to be prepared and approve a statement of its receipt and expenditure for each financial year.

15. **Accounts and audit.**—(1) The funds of the Foundation shall be kept in a personal ledger account of the Foundation with the State Bank of Pakistan or with any Branch of the National Bank of Pakistan acting as an agent of the State Bank.

(2). The accounts of the Foundation shall be maintained in such form and manner as the Auditor-General of Pakistan may determine in consultation with the Federal Government.

(3) The accounts of the Foundation shall be audited by one or more auditors who are chartered accountants within the meaning of the Chartered Accountants Ordinance, 1961 (X of 1961), and are appointed by the Foundation in consultation with the Auditor-General of Pakistan.

16. **Appointment of officers and servants.**—(1) The Foundation may appoint such officers and servants, and engage such consultants or experts, as it may consider necessary for the efficient performance of its functions, on such terms and conditions as it may deem fit.

(2) In fixing the terms and conditions of service of its officers and servants, the Foundation shall as nearly as may be conform to the scales of pay, allowances and conditions of service applicable to the corresponding class of employees of the Federal Government.

17. **Annual report.**—(1) The annual report of the Foundation, which shall, among other things, clearly bring out the benefits accruing to the nation as a result of the activities sponsored by the Foundation, shall be prepared by the Chairman and submitted, through the Board, to the Federal Government alongwith the audited accounts of the Foundation.

(2) The annual report alongwith the audited accounts of the Foundation shall be laid before the National Assembly.

18. **Regulations.**—The Foundation may make Regulations for the efficient conduct of its affairs.

19. **Repeal.**—The Pakistan Science Foundation Ordinance, 1972 (LII of 1972), is hereby repealed.

ANNEXURE-II**List of Projects Approved During 2010-11**

S.No.	Project Title & No.	P.I Name, Designation & Address	Total Cost (Rs.)
1.	Synthesis of Novel Piperidine like Compounds for Anticancer Activity PSF/Res/S-HEJ/Chem (425)	Dr. Zafar Said Saify HEJ Research Institute of Chemistry, International Centre for Chemical and Biological Sciences, University of Karachi, Karachi.	15,90,020/-
2.	Metabolomics Profiling of Pakistani Healthy Persons, Smokers and Lung Cancer Patients by Modern Mass Spectrometric Tools for the Identification of Biomarker Compounds. PSF/.Res/S-KU/Chem (426)	Dr. Syed Ghulam Musharraf, Assistant Professor, International Centre for Chemical and Biological Sciences University of Karachi, Karachi.	710,480/-
3.	Asymmetric Induction through witting reaction of Phosphonium Salts carrying Chiral Auxiliaries PSF/Res/P-US/Chem (427)	Dr. Humaira Yasmeen Gondal, Assistant Professor, Department of Chemistry, University of Sargodha, Sargodha.	1487,300/-
4.	Efficiency of Iron Supported on Porous Materil (Prepared from Peanut Shell) for Liquid Phase, Aerobic Oxidation of Alcohols. PSF/Res/F-UM/Chem (434)	Dr. Muhammad Sadiq, Assistant Professor Department of Chemistry University of Malakand Chakdra (Dir L).	12,41,575/-
5.	Synthesis. Characterization and Biological Evaluation of Bimetallic Sn (IV) and Pd (II) Complexes with Legends having O-and S-Donor Sites. PSF/Res/P-GCU/Chem (436)	Dr. Saira Shehzadi, Assistant Professor, Department of Chemistry Govt. College University, Faisalabad.	1209,100/-
6.	Detoxification/De-Gradation of Organic Pollutants Using Enzyme Immobilized Organogel Silica Nano Composites PSF/Res/S-SU/Chem (437)	Dr. Najma Memon, Assistant Professor, National Centre of Excellence (NEC) in Analytical Chemistry, Universit of Sindh, Jamshoro.	1251,900/-
7.	Gas Chromatographic Analysis of Amino Acid in Skin Samples Psoriatic and Arsenicosis Patients. PSF/Res/S-SU/Chem(439)	Prof. Dr. M. Yar Khuhawar, Director, Institute of Advanced Research Studies in Chemical Sciences University of Sindh, Jamshoro.	783,240/-

8.	Analytical Application of FT-IR Spectroscopy in the Pharmaceutical Formulations PSF/Res/S-SU/Chem (441)	Dr. Tufail Hussain Sherazi, Associate Professor, National Centre of Excellence (NEC) in Analytical Chemistry, University of Sindh, Jamshoro.	868,840/-
9.	“Preconditioning of the stem and progenitor cells to increase their cardiomyogenic potential” PSF/Res/S-KU/Biotech (92)	Dr. Asmat Salim Assistant Professor Dr. Panjwani Centre for molecular & Drug research, University of Karachi, Karachi.	813,200/-
10.	“Determination of biological activities and micro propagation of polygonum amplexicaulis: A popular medicinal plant of north Pakistan” PSF/Res/P-UAAR/Biotech (93)	Dr. M. Sheeraz Ahmed, Lecturer Deptt. of Biochemistry PMAS-University of Arid Agriculture , Rawalpindi.	2,072,590/-
11.	Exploration, Collection, Morphological and Biochemical (SDS-PAGE) Evaluation of Pakistani Chickpea Germplasm PSF/Res/F-UM/Biotech (96)	Dr. Mohammad Nisar Assistant Professor Department of Botany University of Malakand Dir (L).	9,80,750/-
12.	Cloning and Characterization of Plastic Degrading Microbial Isolate (s) PSF/Res/C-QU/Biotech (99)	Dr. Muhammad Ishtiaq Ali Lecturer, Department of Microbiology, QAU Islamabad.	19,67,000/-
13.	Role of endocytic adaptor proteins (APPL1/APPL2) in carcinogenesis PSF/Res/C-QU/Biotech (100)	Dr. Sajid Rashid Assistant Professor National Centre for Bioinformatics. Faculty of Biological Sciences, QAU. Islamabad.	20,00,000/-
14.	Study of Genetic and Molecular Basis of Primary Congenital Glaucoma in Patients of Sindh PSF/Res/S-LUMH/Biotech (101)	Dr. Ali Muhammad Waryah Assistant Professor, Department of Molecular Biology and Genetics, Medical Research Center, Liaqat University of Medical and Health Sciences, Jamshoro.	9,09,430/-
15.	Production and Characterization of Recombinant Laccase From Locally Isolated Thermophilic Geobacillus Strain SBS-4S PSF/Res/P-PU/Biotech (104)	Naeem Rashid School of Biological Sciences, University of Punjab, Quaid-i- Azam Campur, Lahore.	20,00,000/-

16.	Molecular Genetic Studies in Pakistani Families with Autosomal Recessive Primary Molecular Genetics PSF/Res/P-UHS/Biotech (107)	Muhammad Jawad Hassan Assistant Prof. Department of Biochemistry, Univ of Health Sciences, Lahore.	9,11,000/-
17.	Synthesis of Soft and Hard Ferrites and Their Characterization Using Laser Induced Breakdown Spectroscopy PSF/Res/P-AU/Phys (151)	Dr. Yasir Jamil Assistant Professor Department of Physics University of Agriculture Faisalabad.	9,11,000/-
18.	Gas Mixture Optimization study of pulsed De-plasma for Surface Hardening of Metals PSF/Res/C-QU/Phys (152)	Prof. Dr. M. Zakauallah Department of Physics Quaid-i-Azam University, Islamabad.	21,76,380/-
19.	Analysis of High Frequency Field in Focal or Caustic Region of An Inhomogeneous Slab of Chiral Medium. PSF/Res/P-UA/Phys (153)	Dr. Abdul Ghaffar Assistant Professor Department of Physics University of Agriculture, Faisalabad.	671,960/-
20.	Design and Development of a Solar Energy Air Type Heating system for warming up farm structuresw and poultry houses in KPK, PKistan PSF/Res/KPK/UET/Engg (104)	Dr. Zahid Mahmood Department of Agriculture Engineering NWFP University of Engg & Technology, Peshawar.	1,382,440/-
21.	Tribological Performance of Cam/Tappet Interaction in a Direct Acting Overhead Valve-Train Engine. PSF/Res/C-NUST/Engg(105)	Dr. Riaz Ahmed Mufti Associate Professor. School of Mechanical and Manufacturing Engineering (SMME), National University of Science & Technology (NUST) Rawalpindi.	2,145,350/-
22.	Battery based Micro Hydropower plant on catamaran for free water flow operation. PSF/Res/KPK-GIK/Engg(107)	Dr. Muhammad Abid Associate Professor FME, GIK Institute of Engg. Science & Technology. Topi.	716,900/-
23.	Exploring Nutritional Potentials of Moringa oleifera as Poultry Feed Ingredient PSF/Res/P-UVAS/Agr(387)	Prof. Dr. Anjum Khalique Department of Food and Nutrition University of Veterinary & Animal Sciences Lahore.	1,556,850/-

24.	Evaluation of Dried Citrus Pulp as a Concentrate Source and its Effect on Growth Performance and Milk Yield in Ruminant Animals. PSF/Res/P-AU/Agr(394)	Dr. Muhammad Sharif University of Agriculture, Faisalabad.	23,34,740/-
25.	Utilization of Plant Growth Promoting Rhizobacteria for the Induction of Systemic Resistance in Potato Seed against Bacterial Rot and Wilt Diseases. PSF/Res/P-PMAS-AAU/Agr (395)	Dr. M. Inam-ul-Haq Associate Professor Department of Plant Pathology Arid Agriculture University Rawalpindi.	1,919,580/-
26.	Studies of Characterization and Management of Leaf Crinkle Virus Infecting Black gram. PSF/Res/P-PMAS/AAU/Agr (396)	Dr. Muhammad Ashfaq Associate Professor Department of Plant Pathology Arid Agriculture University, Rawalpindi.	2,073,660/-
27.	Role of Nucleopolyhedrovirus in Management of Cotton Bollworm (<i>Helicoverpa armigera</i> Hubner) PSF/Res/P-BZU/Agr(400)	Dr. Hussain Ali Sayyed Institution of Biotechnology Bahauddin Zakariya University Bosan Road, Multan.	2,020,160/-
28.	Parasitoid Wasps as a Source of Novel Insecticidal Molecules PSF/Res/P-AU/Agr(405)	Dr. Zain ul Abidin, Assistant Professor Department of Agri. Entomology University of Agriculture. Faisalabad.	19,31,350/-
29.	Marine Gastropods: Species Identification, Chemotaxonomy and Biochemical Characterization of Medicinally Important Proteins- Hemocyanins PSF/Res/S-KU/Bio (422)	Dr. Syed Abid Ali Assistant Professor H. E. J. Research Institute of Chemistry, University of Karachi, Karachi.	1,563,591
30.	Taxonomy of Tettigoniodea (Ensifera) of Pakistan. PSF/Res/S-SU/Bio (423)	Dr. Riffat Sultana, Assistnat Professor, Department of Zoology University of Sindh, Jamshoro.	1,001,520
31.	Molecular Epidemiological Study on Paratuberculosis along with Pathology of Mesenteric Lymph Nodes and Intestine in Buffalo and Cattle PSF/Res/P-AU/Bio (431)	Prof. Dr. M. Tariq Javed Department of Pathology University of Agriculture Faisalabad.	2,040,490

32.	Influence of Family History of Type 2 Diabetes Mellitus (T2DM) on Pituitary Gonadal Axis in Adolescent and Young Males PSF/Res/P-UL/Bio (434)	Prof. Dr. M. Arslan Distinguish Research Professor of Biological Sciences, Forman Christian College (A Chartered University), Lahore.	1,263,349
33.	Enhanced Production of L-Lysine by Bacteria in Stirred Fermenter for Chick Feed Industry PSF/Res/P-GCU/Bio (436)	Dr. Muhammad Mohsin Javed Assistant Professor Institute of Industrial Biotechnology G C University, Lahore.	1,999,295
34.	Cloning and Characterization of Alpha Amylase from <i>Thermotoga petrophilla</i> for Textile Industry. PSF/Res/P-GCU/Bio (437)	Prof. Dr. Ikram-ul-Haq Director Institute of Industrial Biotechnology GCU, Lahore.	1,494,000
35.	Epidemiological, serological, haematological and therapeutic studies on ovine nematodiasis in three ecological zones of Balochistan. PSF/Res/ B-PARC/Bio (439)	Mr. Jahangir Afridi Scientific Officer Arid Zone Research Center, PARC, Brewery Road Quetta.	836,740
36.	Biodiversity and Ecology of Bats and Rodents in the Thorn Forests and Croplands of the Potohar Plateau PSF/Res/P-PMAS/Bio (446)	Dr. Amjad Rashid Kayani Assistant Professor Department of Zoology Pir Mehr Ali Shah University of Arid Agriculture, Rawalpindi.	2,122,314
37.	Proteome Alterations Associated with <i>Banana Bunchy Top Virus</i> Infection in Banana PSF/Res/C-COMSATS/Bio (447)	Dr. Muhammad Zeeshan Hyder Assistant Professor Department of Biosciences COMSATS Institute of Information Technology, Islamabad.	2,322,970
38.	Effect of protein, probiotics, vitamin C and E on semen quantity and quality, health biomarkers and immunological status of retired male broiler breeders after molting PSF/Res/P-AU/Bio (449)	Prof. Dr. Ijaz Javed Hasan Department of Physiology and Pharmacology, Faculty of Vet. Science, University of Agriculture Faisalabad.	2,058,000
39.	Study of Cysts of Dinoflagellates, Causing Harmful Algal Bloom (Red Tide) in Sediments of Coastal Areas of Pakistan. North Arabian Sea PSF/Res/S-KU/Bio (454)	Mrs. Furqana Chaghtai Assistant Professor Centre of Excellence in Marine Biology University of Karachi Karachi.	938,209

40.	Collection, Evaluation and Sustainable Utilization of Crucifer Biodiversity in Pakistan PSF/Res/C-QU/Bio (455)	Prof. Dr. Zabta Khan Shinwari Chairman, Department of Biotechnology and Bioinformatics Quaid-i-Azam University, Islamabad.	2,107,554
41.	Transcription factor as potential molecular target for cancer chemotherapy in human pancreatic & hepatic cancer cell line” PSF/Res/S-KU/Med (278)	Dr. Huma Rasheed Assistant Professor Dr. Panjwani Center for molecular medicine & drug research. University of Karachi. Karachi.	1,967,730/-
42.	Identification of Mutations in ATP7B Gene of Wilson disease (Hepatolenticular degenerations) in Pakistan Families PSF/Res/P-AMC/NUST/Med (279)	Maj. Gen. Abdul Khaliq Naveed Dean, Faculty of Medicine Army Medical College, NUST, Rawalpindi.	1,318,240/-
43.	Toxic metals lead (Pb) & Cadmium (Cd) & trace elements (Zinc, (zn), Copper(Cu), Iron (Fe) & Aluminum (Al) in mother’s blood, cord blood & me conium of new born from industrial areas. of Karachi. PSF/Res/S-DUHS/Med (290)	Dr. Sina Aziz Associate Professor Sarwar Zubairy liver centre Dow University of Health Sciences Karachi.	1,367,460/-
44.	House Dust Mite Species and Allergen levels in Pakistan population Molecular Characterization and a Phylogenetic Analysis Psf/Res/C-IBGE/Med (318)	Dr. Muhammad Ismail Deputy Director Institute of Biomedical and Genetic Engineering, Islamabad.	2,662,160/-

ANNEXURE-III

Detail of Monitoring and Evaluation of On-Going Projects in 2010-2011

Non-Development Budget

a. Semi Annual Technical Reports

S. #	Project No.	Project Title	Reports
1.	PSF/Res/S-SU/Chem (417)	Studies on <i>hepatoprotive</i> effects of bioactive secondary metabolites of plants by using antioxidants and relevant bioassays	1 st
2.	PSF/Res/C-QU/Chem (419)	Computer aided identification and synthesis of a <i>glucosidase</i> inhibitor	1 st
3.	PSF/Res/C-QAU/Phys (136)	Investigation of the scope of plasma focus as radiation source for material processing/surcease treatment	1 st
4.	PSF/Res/C-QAU/Phys (138)	Developing a Prato type Processing Rector for Plasma Untidily of Streets	1 st
5.	PSF/Res/P-GCU/Phys (143)	Nonlinear landau Damping in space plasmas with Non-Maxwelliean Distribution Function	2 nd
6.	PSF/Res/C-NUST/Phys (147)	Measurement of Dielectric properties of Ceramics (Nano-Ferrites, R ₂ S ₂ O ₇ =Er.Ho)	1 st
7.	PSF/Res/KPK-GIK/Engg (101)	Development of a GPS & Sensor based Mobile Robot; a Test bed for Research Autonomous Navigation & GPS Applications	1 st
8.	PSF/Res/C-PINSTECH/Earth (84)	Value Addition to Topaz by Neutron Irradiation	1 st
9.	PSF/Res/B-BU/Earth (86)	Basement Shear and Transgression near a Restraining Bend on the Chaman Fault an Investigate on of the Structural Kinematics and Seismic Hazard in Northern Baluchistan	1 st
10.	PSF/Res/P-AU/Agr (381)	Entomopathogenic Fungi and Diatomaceous Earths for the Control of <i>Tribolium Castaneum</i> (Herbst.) (Coleoptera: Tenebrionidae) on Stored Wheat.	1 st
11.	PSF/Res/P-CABI/Agr (380)	Exploration of <i>Bacloviruses</i> Prevalent in Different Agro-ecological Zones of Pakistan and Their Evaluation against Target Lepidopteron Pests	2 nd
12.	PSF/Res/C-QAU/Envr (93)	Removal of Inorganic and Organic Pollutants from water/industrial wastes by Micellar Enhanced Ultrafiltration (MEUF)	1 st

13.	PSF/Res/C-NUST/Envr (95)	Development of Rapid and Robust Analytical Methodologies for Detection of Elemental Containments in Environmental Samples using Laser Induced Breakdown Spectroscopy (LIBS)	1 st
14.	PSF/Res/F-GU/Envr (90)	Comparative Study on the Role of Castor (<i>Ricinus communis</i>) cultivars as Phytoremediator	1 st
15.	PSF/Res/C-PINSTECH/Envr (87)	Measurement of Air-born radioactive pollutants (Natural and Fallout Radionuclides) in major cities of Pakistan	2 nd
16.	PSF/Res/P-FJWUAU/Envr (92)	Using GIS Models for Design and Development of Effective Air Quality Management System	2 nd
17.	PSF/Res/P-AU/Envr (85)	Studies of Toxic effects of Metal Mixtures on Fish	2 nd
18.	PSF/Res/C-QAU/Envr (93)	Removal of Inorganic and Organic Pollutants from water/industrial wastes by Micellar Enhanced Ultrafiltration (MEUF)	2 nd
19.	PSF/Res/S-KU/Envr (78)	Biodiversity Systematic and Ecology of Free Living Marine Nematodes of Arabian Sea from Pakistan	3 rd
20.	PSF/Res/S-AKU/Bio (377)	Studies on effects of indigenous medicinal plants on hypercholesterolemia, hypertension and endothelial dysfunction	2 nd
21.	PSF/Res/C-QU/Bio (402)	Study of the microbes and their role (ecological linkages) in most temperate coniferous forest ecozone in Muree hills range.	3 rd
22.	PSF/Res/F-AU/Bio (403)	Effect of sperm concentration, season and extenders on goats semen integrity and fertility	2 nd
23.	PSF/Res/P-AU/Bio (405)	A Contribution to the Rust Flora of AJK (Azad Jammu & Kashmir) and Adjacent Northern Area of Pakistan	2 nd
24.	PSF/Res/P-UVAS/Bio (416)	Estimation of <i>Aflatoxins</i> in Milk and its Control Measures	1 st
25.	PSF/Res/C-QU/Bio (419)	Functional Analysis of a <i>Proteinase Inhibitor</i> Gene Construct for insect resistance	2 nd
26.	PSF/Res/P-PMAS.AAU/Bio (420)	Ecology, status and management of Fisheries in Mangla Dam	2 nd
27.	PSF/Res/S-AKU/Bio (377)	Studies on effects of indigenous medicinal plants on hypercholesterolemia, hypertension and endothelial dysfunction	2 nd

28.	PSF/Res/P-UHS/Med (292)	Anti Inflammatory effect of zingiber officinal (Ginger) and methylprednisolone on the rat model of allergic inflammation	1 st
29.	PSF/Res/C-IBGE/Med (271)	Genetic screening of Pakistani population for CYP2D6 genotypes	1 st

b. First Annual Technical Reports

S. #	Project No.	Project title
1.	PSF/Res/S-KU/Biotech/Med (80)	Production of Monoclonal Antibodies for rapid diagnosis of Hepatitis-C
2.	PSF/Res/C-IBGE/Biotech/ Med (87)	Prevalence, Molecular Genetics and Diagnosis of fragile X Mental retardation in Pakistan
3.	PSF/Res/S-HEJ/Chem (403)	Design synthesis and characterization of <i>P-octiphynylactalix[4] Arane a Supeamoleculalr</i> multifunctional pore having practical application in medicine and mechanics
4.	PSF/Res/C-QAU/Phys (136)	Investigation of the scope of plasma focus as radiation source for material processing/surcease treatment
5.	PSF/Res/P-GCU/Phys (143)	Nonlinear landau Damping in space plasmas with Non-Maxwellian Distribution Function
6.	PSF/Res/C-NUST/Phys (147)	Measurement of Dielectric properties of Ceramics (<i>Nano-Ferrites, R₂S₂O₇ = Er, Ho</i>)
7.	PSF/Res/P-CABI/Agr (392)	Maximizing Yield of Chickpea through Soil Amendments under Rainfed and Irrigated Conditions
8.	PSF/Res/P-MAS.AAU/Agr (380)	Exploration of Bacloviruses Prevalent in Different Agro-ecological Zones of Pakistan and Their Evaluation against Target Lepidopteron Pests
9.	PSF/Res/P-MAS.AAU/Agr (374)	Microbial Conversion of Agricultural Wastes into value added Biofertilizer for sustainable Legumes-Wheat Cropping System in pothwar region
10.	PSF/Res/P-AU/Envr (85)	Studies of Toxic effects of Metal Mixtures on Fish
11.	PSF/Res/C-PINSTECH/Envr (87)	Measurement of Air-born radioactive pollutants (Natural and Fallout <i>Radionuclides</i>) in major cities of Pakistan
12.	PSF/Res/P-FJWU/Envr (92)	Using GIS Models for Design and Development of Effective Air Quality Management System
13.	PSF/Res/C-QAU/Envr (93)	Removal of Inorganic and Organic Pollutants from water/ industrial wastes by Micellar Enhanced Ultrafiltration (MEUF)
14.	PSF/Res/P-PMAS.AAU/Bio (264)	Studies for the Selection of probiotic cultures for yogurt making
15.	PSF/Res/P-NIAB/Bio (353)	Studying the role of anti-oxidant enzymes in controlling programmed cell death (PCD) triggered

		in plants in response of exogenous stresses
16.	PSF/Res/S-KU/Bio (360)	Hatchery culture of commercially important oysters
17.	PSF/Res/S-AKU/Bio (365)	Role of testosterone and cytokines interactions in fertility regulation
18.	PSF/Res/P-AU/Bio (375)	Prospects of breeding and culturing of <i>Channa marulius</i> by using different techniques
19.	PSF/Res/C-PMNH/Bio (380)	Taxonomic and Ethnobotanical studies of economically important plants of Galiat with special reference to their trade
20.	PSF/Res/B-BUITMS/Bio (388)	Studies on the Regeneration of Juniper (<i>Juniperus excels Bieb</i>) in Balochistan
21.	PSF/Res/C-QU/Bio (402)	Study of the microbes and their role (ecological linkages) in most temperate coniferous forest ecozone in Muree hills range.
22.	PSF/Res/F-AU/Bio (403)	Effect of sperm concentration, season and extenders on goats semen integrity and fertility
23.	PSF/Res/S-KU/Bio (404)	Isolation and Characterization of Bio-active Protein from Thermotolerant Bacteria of Suboptimal Habitat
24.	PSF/Res/S-AU/Bio (405)	A Contribution to the Rust Flora of AJK (Azad Jammu & Kashmir) and Adjacent Northern Area of Pakistan
25.	PSF/Res/P-UAF/Bio (408)	Preparation and characterization of legumes protein isolates to improve the nutritional and functional properties of baked products
26.	PSF/Res/P-PU/Bio (410)	Effects of Agricultural Practices and Refugia on Pest Control Potential of Spider Residing Rice Fields of Punjab Pakistan
27.	PSF/Res/P-AU/Bio (412)	Evaluation of Sugarcane Polysaccharides and Glycoprotein as Biological Response Modifiers and their Therapeutic Effects on <i>eimeria</i> infection in Chickens
28.	PSF/Res/C-QU/Bio (419)	Functional Analysis of a <i>Proteinase Inhibitor</i> Gene Construct for insect resistance
29.	PSF/Res/P-PMAS.AAU/Bio (420)	Ecology, status and management of Fisheries in Mangla Dam
30.	PSF/Res/P-Med/Bio (261)	Computer Aided Identification of cholinesterase inhibitors for the Treatment of Alzheimer's Disease and Related Dementias
31.	PSF/Res/C-QU/Med (420)	Effect of peripheral Administration of puberty onset protein kisspeptin on male sex hormones and spermatogenesis in prepubertal stages: an in vivo and in vitro
32.	PSF/Res/S-AKU/Med (293)	Association between neuregulin-1 mutations and schizophrenia in a Pakistani population : A case control study

c. Second Annual Technical Reports

S. #	Project No.	Project Title
1.	PSF/Res/P-NBGE/Biotech/Ind (32)	Mutation breeding of lactobacillus delbrukii for hyper production of lactic acid for the development of biodegradable polymers
2.	PSF/Res/P-NBGE/Biotech/Ind (47)	Development of hyper producer cephalosporin C producing strain of Acremonium
3.	PSF/Res/P-NBGE/Biotech/Med (50)	Detection of Y chromosome microdeletion associated with infertility in different geographic/ethnic groups in Pakistan
4.	PSF/Res/C-PINSTECH/Biotech (51)	Microbial leaching of Uranium, Copper and vanadium from low grade graphite schist ores
5.	PSF/Res/C-QU/Chem (408)	Molecular designed precursors for chemical vapor deposition of ceramic materials
6.	PSF/Res/C-QU/Phys (138)	Developing a prato type processing Rector for Plasma Unitidity of steets
7.	PSF/Res/P-AU/Engg (53)	Decision support system for better crop productivity and environmental quality
8.	PSF/Res/S-KU/Envr (78)	Biodiversity systematic and ecology of free living marine nematodes of Arabhian sea from Pakistan
9.	PSF/Res/P-NIAB/Bio (353)	Studying the role of anti-oxidant enzymes in controlling programmed cell death (PCD) triggered in plants in response of exogenous stresses
10.	PSF/Res/P-AU/Bio (375)	Prospects of breeding and culturing of <i>Channa marulius</i> by using different techniques
11.	PSF/Res/C-PMNH/Bio (380)	Taxonomic and Ethnoboanical studies of economically important plants of Galiat with special reference to their trade
12.	PSF/Res/C-QU/Bio (402)	Study of the microbes and their role (ecological linkages) in most temperate coniferous forest ecozone in Muree hills range.
13.	PSF/Res/C-PINSTECH/Med (207)	Helicobacter Pylori in Children: Diagnostic Method Prevalence, Strain Identification and effect on Growth in Pakistanis
14.	PSF/Res/S-AKU/Med (210)	Deficiency of Vitamins B6, B12 and Folic Acid and Its Relationship to Hyperhoocysteinemia in a Pakistani population: is there any role of methylenetetrahy Drofolate Reductase gene in causing hyperhomocysteinemia in this population

d. Final Technical Reports Adopted by Technical Committee

S. #	Project No.	Project Title
1.	PSF/Res/C-QU/Chem (270)	Studies of Vanadium Organic Ligand Systems containing peptide linkage synthesis structural elucidation and biological application
2.	PSF/Res/C-QU/Chem (395)	Stereoselective total synthesis of sme antimalarial, antituberculosis, antifungal and cytotoxic dihydroisocumarins metabolites
3.	PSF/Res/P-PU/Chem (406)	Feasibility for the production of Bio-diesel form indigenous vegetable Oil resources
4.	PSF/Res/F-KUST/Chem (409)	Phytochemical investigation and biological activity of genus sonchus with emphasis on biologically active constituents
5.	PSF/Res/S-SU/Chem (411)	Capillary gas chromatographic determination of glyoxal methylglaxol and dimethylglaxal and a-keto acids from biological fluids in fermented food
6.	PSF/Res/P-AU/Biotech/Med (24/1)	Technological development for the production of gonadotropins from animal sources
7.	PSF/Res/P-NIAB/Biotech/Agr (44)	Characterization of Pakistani wheat varieties by Microsatellite markers
8.	PSF/Res/P-NBGE/Biotech/Ind (47)	Development of hyper producer cephalosporin C producing strain of Acremonium
9.	PSF/Res/P-NIBGE/Biotech/Envr (48)	Cloning of raw starch digesting Alpha Amylase from Bacillus Sp. And expression in E. coli
10.	PSF/Res/P-NIBGE/Biotech/Agr (52)	Bacteriocin production and its role in competition in Rhizobial inoculants from sustainable Agriculture Perspective
11.	PSF/Res/S-NIA/Biotech (134)	Use of induced somatic mutation and biotechnological technique for the genetic improvement of sugarcane (Sachharum sp. Hybrid)
12.	PSF/Res/AJK-UAJK/Biotech (196)	Genetic analysis and field evaluation of potato (Solnum tubersum L)Genotype in Azad Kashmir
13.	PSF/Res/P-UAAR/Biotech (220)	Cloning and sequencing of major DNA components of banbana Bunchy top Virus from Pakistan
14.	PSF/Res/C-QU/Phys (246)	AC Magnetic measurement
15.	PSF/Res/C-QU/Phys (134)	Measurements a prato lionization cross sectionof Atoms
16.	PSF/Res/C-QAU/Phys (138)	Developing a Prato type Processing Rector for Plasma Untidily of Streets
17.	PSF/Res/P-KRL/Engg (284)	Synthesis and Characterization of Piezo-Electric BaTiO3 Crystals

18.	PSF/Res/P-PCRWR/Engg (80)	Effects of Land Leveling on Land Use Intensity water use and water application efficiencies
19.	PSF/Res/F-GIK/Engg (97)	Solar Bio-Digester for Anaerobic processing of sewage into biogas and fertilizer
20.	PSF/Res/S-KU/Engg (76)	Geological, geochemical and technological properties of China Clay Deposits of nagarparkar for their value added industrial application
21.	PSF/Res/B-BU/Earth (57)	Facies Distribution, Pale-environmental Analysis and Petroleum prospects of the Foreland Basin Sediments in the kirther Fold-belt
22.	PSF/Res/S-PCSIR/Envr (86)	Hydrochemical studies and development of indigenous defloridation Technology for fluoride contaminated groundwater in the Thar Desert Pakistan
23.	PSF/Res/S-PCSIR/Bio (221)	Preparation of products of economic importance (Chitin & Chitosan) from shellfish waste
24.	PSF/Res/S-SU/Bio (287)	Formulation of low cost quality fish feed from indigenous raw material and its effects on growth and survival of major carps
25.	PSF/Res/P-AU/Bio (355)	Pharmacological evaluation of two antihyperlipidaemic indigenous medicinal plants in albino rabbits and determination of their mechanisms of action
26.	PSF/Res/P-AU/Bio (408)	Preparation and characterization of legumes protein isolates to improve the nutritional and functional properties of baked products
27.	PSF/Res/C-COMSATS/Med (220)	Epidemiological Investigation of Pertussis infection in Pakistan the first ever report of this type from Pakistan
28.	PSF/Res/ILP/026/03	Establishment of pilot green tea processing plant
29.	PSF/Res/ILP/027/03	Production of iron and steel from kalabagh iron ore through direct reduction process
30.	PSF/Res/ILP/034/03	Design and manufacturing of light weight composite reinforced CNG cylinders.

ANNEXURE-IV

List of Scientific Publications Produced through PSF Funded Completed Projects in 2010 – 11

S. #	Project No.	Publications
1.	PSF/Res/S-NIA/Chem (292)	i. Accumulation of Organochlorine in edible fishes of muscles from the waste water of Karachi, Pakistan, J. Chem. Soc. Pak, Vol-27(4). 2005 p: 404-408 ii. "Look before you eat" Article, Sci-Tech World Daily Dawn, Saturday May-20, 2006 Determination of level of PCBs in small fishes from three different coastal areas of Karachi, Pakistan, Pak. J. Sci. Ind. Res, 2005, 48 (4), p 247-251.
2.	PSF/Res/C-QU/Chem (395)	i. Aamer Saeed and Z. Ashraf, Efficient Synthesis of Some 3-substituted-1 (2H)-Isoquinolones. Pharm. Chem. Journal. 42(5), 277-280 (2008) ii. Aamer Saeed, Hummera Rafique and Z. Ashraf, Synthesis and cytotoxic activity of Stellatin (3,4-Dihydro-8-hydroxy-7-hydroxymethyl-6-methoxyisocoumarin) from <i>Aspergillus</i> and <i>Emericella</i> spp., J. Asian Natural Products Research. iii. Aamer Saeed, Hummera Rafique and Z. Ashraf, Total synthesis and bioactive screening of 7-Butyl-6-8-dimethoxy-3-pentylisocoumarin and dihydroisocoumarin. iv. Aamer Saeed, Hummera Rafique and Z. Ashraf, Total synthesis and Biological evaluation of Typharin analogue: "3-Cinnamyl-6-8 dihydroxy-7-methyl-3-4-dihydroisocoumarin". v. Aamer Saeed, Hummera Rafique and Z. Ashraf, synthesis of Homophthalic acids and their conversion into variety of biologically active isocoumarins and 3,4-dihydroisocoumarins derivatives.
3.	PSF/Res/S-SU/Chem (411)	i. L.A. Zardari M. Y Khuhawar, A. J. Laghari, Capillary GC Analysis of Glyoxal and Methylglyoxal in the serum and Urine of Diabetic Patients After use of 2,3-Diamino-2, 3-dimethylbutane as Derivatizing Reagent., Chromographia, 2009, 70, 891-897

4.	PSF/Res/S-NIA/Biotech (134)	<ul style="list-style-type: none"> i. Khan, I. A., Dahot M.U. Seema, N., Yasmins, S., Bibi, S. And Khatri, A. 2009. Genetic Variability in Sugarcane plantlets developed through invitro mutagenesis. Pak. J. Bot. 41(1) 153-166 ii. Khan, I. A., Bibi, S. Yasmine. S., Khatri, A Seema, N. and Afghan, S. 2010. Study of genetic variability in mutated population of sugarcane clone NIA-98 through molecular markers (RAPD and Trap) 42 (1) Pak. J. Bot 605-614.
5.	PSF/Res/AJK-UAJK/Biaotech (196)	<ul style="list-style-type: none"> i. Khan, M. Fareed. 2008. Genetic Analysis and Field Evaluation of Potato (<i>Solanum tuberosum</i> L. Genotypes in Azad Kashmir. Ist Annual Report submitted to Pakistan Science Foundation (PSF). Pp 1-31 ii. Khan, M. Fareed. 2009. Genetic Analysis and field Evaluation of Potato (<i>solanum tuberosum</i>) L. Genotypes in Azad Kashmir. Paper presented in the conference: Advances in Agriculture: Prospects and Potentials of Natural Resources in Food Security held from 11-12 August, 2009 at Faculty of Agriculture, Rawalakot, Azad Kashmir. Proceeding pp. iii. Khan, M. Fareed. 2009. Genetic Analysis and field Evaluation of Potato (<i>solanum tuberosum</i>) L. Genotypes in Azad Kashmir 2nd Annual Report submitted to Pakistan Science Foundation (PSF).. Pp 1-22 iv. Khan, M. Fareed. 2009. Genetic Analysis and Field Evaluation of Potato (<i>solanum tuberosum</i>) L. Genotypes in Azad Kashmir. Final Technical Report submitted to Pakistan Science Foundation (PSF). Pp 1-58 v. Khan, M. Fareed and Asad Hussan Shah. 2010. Evaluation of Potato (<i>solanum tuberosum</i>) L. Germplasm for yield and Adaptability in Azad Kashmir Pakistan Jour. Of Botany. vi. Khan, M. Fareed. 2010. Evaluation of Potato Cultivars for True potato Seed (TIPS) Production Potential and Genetic Variability under Climatic conditions of Rawalakot Azad Kashmir, Pakistan. International Jour. Of Environmental Sciences, Bangladesh (Submitted)

6.	PSF/Res/S-PCSIR/Bio (221)	<p>i. A patent entitled "A process for the preparation of chitin from shrimp waste" has been accepted by the patent office, Government of Pakistan. SL. No. 1399757</p> <p>ii. A manuscript entitled "preparation and characterization of chitin from shrimp waste" is under compilation for publication in Pakistan Journal of scientific and Industrial Research.</p>
7.	PSF/Res/S-SU/Bio (287)	<p>i. N.T. Narejo, P.K. Lashari and S. I. H. Jafri (2008) formulation of low-cost fish feed from indigenous raw materials and its effect on growth survival and production of major carps. <i>Sindh Univ. Jour. (Sci:Ser)</i> . (Submitted for publication)</p>
8.	PSF/Res/P-UAF/Bio (408)	<p>i. One paper related to this research project has been published. Butt. M. S and R. Batool. 2010 Nutritional and Functional Properties of some promising Legumes Protein Isolates. <i>Pak. J. Nutrition</i>. 9(4): 373-379</p>
9.	PSF/Res/US-NSF/C-QU/Phys (122)	<p>i. Optimization of carriers by self-doping in $Cu_{0.5}Tl_{0.5}Ba_2Ca_2Cu_{3-y}M_yO_{10-\delta}$ superconductor. By M. Mumtaz, Sajid Khan, Nawazish A. Khan, <i>J. Appl. Phys.</i> (2010) accepted for publication.</p> <p>ii. "Fluctuation-induced conductivity of $Cu_{0.5}Tl_{0.5}Ba_2Ca_2Cu_2M_1O_{10-\delta}$ (M = Si, Sn, Ge) superconductors" by M. Irfan, Sajid Khan, Najmul Hassan and Nawazish A. Khan. <i>Journal of Superconductivity and Novel Magnetism</i> 22, 769 (2009).</p> <p>iii. Effect of Sn Substitution on the Paraconductivity of Polycrystalline $Cu_{0.5}Tl_{0.5}Ba_2Ca_2Cu_{3-y}Sn_yO_{10-\delta}$ superconductors. By Nawazish Ali Khan, Najmul Hassan, Sana Nawaz, Babar Shabir, Sajid Khan and Azhar A. Rizvi, <i>J. Appl. Phys.</i> 107, 083910 (2010).</p> <p>vi. The effect of grain size on the fluctuation induced conductivity of $Cu_{1-x}Tl_xBa_2Ca_3Cu_4O_{12-\delta}$ superconductor thin films. By A A Khurram, M. Mumtaz, Nawazish A. Khan, M.M. Ahadian and</p> <p>v)</p>

		<p>Azam Irajizad, Supercond. Sci. Technol. 20, 742 (2007).</p> <p>Excess conductivity of $\text{Cu}_{0.5}\text{Tl}_{0.5}\text{Ba}_2\text{Ca}_1\text{Cu}_2\text{O}_{8-y}$ thin films induced by thermal fluctuations: importance of 3D fluctuations. By A.A. Khurram and Nawazish A. Khan, Journal of Physics: Condensed Matter 20, 045216 (2008).</p> <p>Effects of Post-Annealing on the Infrared Active Phonons Modes of Low Anisotropic ($\gamma=5\sim 11$) $\text{u}_{1-x}\text{Tl}_x\text{Ba}_2\text{Ca}_2\text{Cu}_3\text{O}_{10-\delta}$ Superconductor Thin Films.</p> <p>vii) Nawazish A. Khan, A.A. Khurram and M. Mazhar, Physica C 407, 23 (2004).</p>
10.	PSF/Res/C-QU/Phys (123)	<p>i. Weiss oscillations in the electronic structure of modulated grapheme, M. Tahir, K. Sabeeh and A. Mackinnon, J. Phy: Condens. Matter 19, 406226 (2007).</p> <p>ii. Theory of Weiss oscillation in the magnetoplasmon spectrum of Dirac electrons in grapheme, M. Tahir, K. Sabeeh, Phys. Rev. B 76, 195416 (2007)</p> <p>iii. Quantum transport of Dirac electrons in grapheme in the presence of a spatially modulated magnetic field, M. Tahir, K. Sabeeh. Phys. Rev. B 77, 195421(2008).</p> <p>iv. Inter-band magnetoplasmons in mono- and bilayer grapheme, M. Tahir and K. Sabeeh, J. Phys: Condens. Mater 20, 425202 (2008).</p> <p>v. Chiral tunneling through time-periodic potential in monolayer grapheme, M. Ahsan Zeb, K. Sabeeh, M. Tahir, Phys. Rev. B 78, 165420 (2008).</p> <p>vi. Suppression of Weiss oscillations in the magnetoconductivity of modulated grapheme monolayer, M. Tahir, K. Sabeeh, Int. J. Mod. Phys. B 23, 3445 (2009).</p> <p>vii. Thermodynamic properties of electrically modulated monolayer grapheme, R. Nasir, M. A. Khan, M. Tahir and K. Sabeeh.</p> <p>viii. Magnetic field effects on current instability in a weakly modulated 2DEG, M. Tahri, K. Sabeeh V. Fessatidis, Norman J. M. Horing and Jay. D. Mancini.</p>

11.	PSF/Res/C-PINSTECH/Phys (140)	<ul style="list-style-type: none"> i. Muhammad Rafique, Matiullah, Saeed ur Rehman, Said Rehman, M. Ikram Shahzad, Bushra Azam, Ishfaq Ahmed, Abdul Majid and Muhammad Iqbal Siddique: "assessment of indoor radon doses received by the dwellers of balakot nwfp pakistan: a pilot study" Carpathian Journal of Earth and Environmental Sciences, 6(2011) 133-140 ii. Muhammad Rafique, U. S Rehman, Said Rehman, Matiullah, M. Ikram Shahzad, Navid Ahmed, Javid Iqbal, Basharat Ahmed, Tanveer Ahmed and Nadeem Akhter "assessment of indoor radon doses received by the student in the azad kashmir schoold. Pakistan" radiation protection dosimetry, doi: 10. 1093/rpd/ncq/267 (2010) 1-8. iii. Muhammad RAfique, Said RAhman, S. U Rehman, Shahida Jabeen and H. A Khan: "indoor radon concentration measurment in the dwellings of district poonch (azad kashmir), pakistan" Radiation protection Dosimetry 138 (2010) 158-165 iv. M. Ikram Shahzad, G. Sher, E.U Khan, S. Manzoor, M. Rafique, Saeed ur Rehman, Shahida Jabeen, and H.A. Khan: "Measurement of Radon (222rn) Concentration at High Altitudes In The Northern Areas of Pakistan" the Nucleus, 46(2009) 15-20. v. Muhammad RAfique, Saeed ur Rehman, Shahida Jabeen, Muhammad Ikram Shahzad, Said Rehman, Shyjaht Bukhari, TABassum Nasir and Matiullah: "Measurment and comparision of indoor radon levels in new and old buildings in the city of muzaffarabad (azad kashmir) Pakistan: a pilot study: radioisotypes 58(2009) 749-760 vi. SLIM Colaboration; E. Medinaceli. et al. "Magnetic Monopole Search at High Altitude With the Slim Experimnet" Radiation \Measurement, 44(2009) 889. vii. SLIM Collaboration: Z. Sahnoun, et al. "Search for Strange Quark Matter And Q-Balls With The Slim Experiment", radiation Measurment, 44 (2009) 894. viii. Muhammad RAfique, Shahida Jabeen, M. Ikram Shahazad: "General public's and
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		<p>physicians' perception of health risk associated with radon exposure in the state of azad jammu and kashmir" Public Health Nursing, 25 (2008) 326-334.</p> <p>ix. SLIM Collaboration: G. Giacomelli, et al. "search for magnetic monopoles, nuclearites and q-balls", Second school on Cosmic Rays and Astrophysics, Journal of Physics: Conference Series 116 (2008) 012005.</p> <p>x. SLIM Collaboration : S. Cecchini, et al. "flux upper limits for massive rare particles with the slim experiment". Proceedings of the 30th International CosmicRAY Conferene, Rogelio Caballero, Juan Carlos D' Olivo, Gustavo Medina-Tanco, Lulas Nellan, Federico A. Sanchez, Jose F. Valdes-Galicia (eds.) Universided Nacional Auonoma de Mexico. Mexico City. Mexico . 2008, Vol. 4 (HE part 1) 787-790. ID 608</p>
12.	PSF/Res/KPK-GIK/Engg (102)	<p>i. Kh. S. Karimov, Muhammad abid "investigation of a photo-voltic system with variable solar modules inclination angels", paper sent in March. 2009 to Kuwait J. of Science and Engineering. In press</p> <p>ii. K. S Karimov, Muhammad Abid, H. Mehdi, Q Shams "Global Solar irradiation estimation on a n inclined surface", paper accepted for presentation and publication in international conference on Utilization of Renewable Energy Resources that will be held in Dushanbe, 28-30, 2009. Tajikistan.</p> <p>iii. Kh. S. Karimov, Muhammad Abid, A. Iftikhar, H. Safee, "Investigation of a simple combined PV- thermal collector system with built in storage water heater", paper accepted for presentation and publication in International Conferences on Utilization of Renewable Energy Resources that will be held in Dushanbe, 28-30 Sep 2009, Tajikistan.</p>

NSLP Supported Projects

Sr. No	Project No.	Publication
1.	PSF/NSLP/S-PARC (01)	<p>1. Khan. A, Ghazi, R.R. and Soomro, M. H.,2008. A new species of the genus <i>Helicotylenchus</i> Steiner, 1945 (Nematoda: Hoplolaimineae) from Balochistan, Pakistan. <i>Proceedings of Parasitology</i>, 46:97-91.</p> <p>2.Khan, A. Bilqees, F.M. Khatton. A. and Shaukat, S.S, 2008. Histopathology of Pomegranate roots infected with <i>Meloidogyne javanica</i>. <i>Int. J. Biol. Biotech.</i>, 5:231-234.</p> <p>3. Khan. A., Shaukat. S.S and Khan I., 2009. An analysis of phyto nematode associated with Almond in Balochistan. <i>Indian J. Nematology.</i>, 39:138-141.</p> <p>4. Khan. A., Sayyed, M., Bilqees. F.M., Khanzada, A.K and Khatton, N., 2010. Histological response of almond roots infected with root knot nematode, <i>Meloidogyne incognita</i>. <i>Proc. Of Parasitology</i>.50:53-56</p>
02.	PSF/NSLP/P-UAAR (35)	<p>1. S. Akhtar, M. S. Ansari, B.A. Rakha, S.M.H. Andrabi, N. Ullah and M. Khalid. 2010. Invitro evaluation of liquid storage buffalo semen at 5° C diluted in soya lecithin as based extender (Bioxell ®), tri citric egg yolk, skim milk and egg yolk citrate extenders. <i>Reproduction in Domestic animals</i>. DOI:10.1111/j.1439-0531.2009.01561.x</p> <p>2. S. Akhtar, M. S. Ansari, B.A. Rakha, S.M.H. Andrabi and N. Ullah. 2010. Cryopreservation of buffalo bull (<i>babalus bubalis</i>) semen in Bioxell ® extender. <i>Therionology</i>,74:951-955</p>
03	PSF/NSLP/P-UVAS(68)	<p>1. Ali. A, Nawaz M, Babar M E, Maqsood A. First report on standard G-banded karyotype of Nili ravi buffalo. <i>Pakistan Jornal of Zoology</i>.2009.42:177-180</p>

ANNEXURE-V

List of NSLP Projects Approved by Technical Committees in 2010-2011

Sr. No	Name, Designation & Address of PI	Project Title & No.	Total Cost
1.	Dr. Ghulam Muhammad, Department of Clinical Medicine & Surgery, University of Agriculture Faisalabad	Comparative evaluation of single phosphate and di calcium phosphate in cows and buffaloes (i) effect on production of health (ii) Treatment of phosphorus associated clinical disorders. NSLP/P-AU(89)	2,042,040/-
2.	Dr. Asma Maqbool Assistant Professor, Department of Biological Sciences, Forman Christian College University, Lahore	Increasing Phosphorus use Efficiency in Wheat Through Genetic Engineering NSLP/P-FCCU (121)	3,906,600/-
3.	Dr. M. Asif Shahzad Assistant Professor IANFT, University of Agriculture, Faisalabad	Budgeting Dietary Protein and Carbohydrate Fractions: a Practical Approach to Escalate Rumen Dynamics for Maximizing Productive Potential of Dairy <i>beetal</i> Goat NSLP/P-AU (109)	3,393,540/-
4.	Dr. Nafees Akhtar Associate Professor, Department of Theriogenology, University of Agriculture Faisalabad	Studies on the Effect of Estrogen and Progesterone along with Insulin in In Vitro Gonadotrophin Secretion from Buffalo Adenohypophysis. NSLP/P-AU (120)	2,733,090/-
5.	Dr. Gul Sanat Shah, Principal Scientist Nuclear Institute for Food and Agriculture, Peshawar	Breeding for Bruchids Resistance in Mungbean (<i>Vigna radiate</i> (L) Wicizek NSLP/KP-NIFA (128)	2,437,596/-
6.	Dr. Hussnain Ali Syed, Institute of Biotechnology, Bahaudin Zakarya University Bosan Road, Multan	Global Warming and evolution of Resistance to Insecticides in <i>Plutella</i> <i>xylostella</i> : A Serious Pest of Cruciferous Crops. NSLP/P-BZU (130)	1,479,000/-

7.	Dr. Feroza Kazi, National Nematological Research Center, University of Karachi, Karachi	Am Fungi as Potential Biocontrol Agent for Crop Improvement and Bioprotectant Against Root-Knot Nematodes NSLP/S-KU (134)	1,654,440/-
8.	Prof. Dr. Viqar Husain, Department of Geology, University of Karachi Karachi	Assesment of Groundwater Quality and Soil Salinity in Parts of Thatta District, Sindh: Impact of Recent Floods on Agricultural Productivity and Options to Manage Salinity in Irrigated Lands NSLP/S-KU (140)	3,695,460/-
9.	Dr. M. Nadeem Hassan, Senior Scientific Officer, Department of Biosciences, CIIT, Islamabad.	Biological Control of Blast & Bakanae Diseases of Rice by Using Improved Formulation of Native Bio-antagonists NSLP/C-CIIT (141)	3,984,120/-
10.	Shahid Akbar Khalil Nuclear Institute for Food and Agriculture (NIFA) Tarnab, Peshawar.	Improvement of Stevia (<i>Stevia rebaudiana</i> Bertoni) through induced mutations and in Vitro somaclonal variations. NSLP/KP- NIFA(160)	2,072.640/-
11.	Muhammad Zahid Senior Scientist, Nuclear Institute for Food & Agriculture, Peshawar	Integrated Management of Peach flat- headed borer, <i>Isphenoptera dadkhani</i> (Oben.) damaging trees of stone Fruit orchards. NSLP/KP-NIFA(171)	1,992.264/-

ANNEXURE- VI**Detail of Monitoring and Evaluation of NSLP On-Going Projects in 2010-2011****a. Semi Annual Reports**

Sr. No.	Project No.	Project Title	Reports
01	PSF/NSLP/S-PARC (01)	Nematodes Associated with Almond (<i>Prunus amygdalus</i> Batsch) and Pomegranate (<i>Punica granatum</i> L.) and their Management using Oil-Cakes in Khuzdar and Kalat Districts	3 rd
02	PSF/NSLP/S-BARI (04)	Production of Germplasm and Breeding Material of Wheat for Drought and Heat Tolerance	3 rd
03	PSF/NSLP/P-NIBGE (19)	Exploration of Cotton Germplasm Potential Against Drought Stress Using Genomic Approaches	2 nd
04	PSF/NSLP/P-AU (25)	Quantification of Economic Gain from Chickpea Crop Sown on Irrigated Fields in Southern NWFP & Its Implication for Agricultural Extension	2 nd
05	PSF/NSLP/P-UAAR (35)	Identification of Chemically Defined Extenders for Cryopreservation of Buffalo Bull Spermatozoa	3 rd
06	PSF/NSLP/S-SAU (40)	Assessment of Pesticide Residues form Selected Vegetables through Traditional Processing	1 st
07	PSF/NSLP/P-UVAS (47)	Evaluating milk performance of local and exotic cattle breeds through SNP detection	2 nd
08	PSF/NSLP/S-SAU(64)	Detection of Antibiotic Residues form Milk Meat and Eggs	2 nd
09	PSF/NSLP/S-KU(65)	Application of Biopesticides Entomopathogenic Nematodes in Vegetable Fields Affected with Root Knot Nematodes	1 st
10	PSF/NSLP/P-UAAR(74)	Pre and Post-harvest Treatment of Food Grade Chemicals to Improve Peach Fruit Quality and Shelf-Life	1 st

11	PSF/NSLP/F-NIFA(76)	Development of Slow Acting Toxicant Baits for Elimination of Underground Colonies of Crop & Building Termites	1 st
12	PSF/NSLP/P-AU(78)	Escalating the Feed Value of Wheat Straw through Ensiling with Rumen Digesta as an Inoculant in Ruminant Animals	1 st
13	PSF/NSLP/C-CIIT (79)	Field Evaluation of Biopesticides/Bio-inoculants for Red Rot (<i>Colletotrichum falcatum</i> Went) Suppression & Enhanced Sugarcane Production	1 st
14	PSF/NSLP/KP-NIFA (82)	Development of Package of Technology for Poultry Feed Irradiation in Pakistan	1 st
15	PSF/NSLP/P-FCCU (121)	Increasing Phosphorus use Efficiency in Wheat Through Genetic Engineering.	1 st

b. First Annual Reports

Sr. No.	Project No.	Project Title
16	PSF/NSLP/P-NIBGE (19)	Exploration of Cotton Germplasm Potential Against Drought Stress Using Genomic Approaches
17	PSF/NSLP/P-AU (25)	Quantification of Economic Gain from Chickpea Crop Sown on Irrigated Fields in Southern NWFP & Its Implication for Agricultural Extension
18	PSF/NSLP/S-SAU (40)	Assessment of Pesticide Residues form Selected Vegetables through Traditional Processing
19	PSF/NSLP/P-UVAS (47)	Evaluating milk performance of local and exotic cattle breeds through SNP detection
20	PSF/NSLP/P-PU (53)	Natural compounds from allelopathic Trees as Antifungal Agents against <i>Ascochyta Rabiei</i> (PASS)
21	PSF/NSLP/S-SAU(64)	Detection of Antibiotic Residues form Milk Meat and Eggs
22	PSF/NSLP/P-UVAS(68)	Cytogenetic Screening of Buffalo Bulls & Replacement Heifers for Genetic Improvement in Punjab

c. Second Annual Reports

Sr. No.	Project No.	Project Title
23	PSF/NSLP/S-BARI (04)	Production of Germplasm and Breeding Material of Wheat for Drought and Heat Tolerance
24	PSF/NSLP/P-UAAR (35)	Identification of Chemically Defined Extenders for Cry preservation of Buffalo Bull Spermatozoa

d. Final Reports

Sr. No.	Project No.	Project Title
25	PSF/NSLP/S-PARC (01)	Nematodes Associated with Almond (<i>Prunus amygdalus</i> Batsch) and Pomegranate (<i>Punica granatum</i> L.) and their Management using Oil-Cakes in Khuzdar and Kalat Districts
26	PSF/NSLP/P-NIAB (14)	Insecticide Resistance Management of Lepidopteron Pests of Cotton

ANNEXURE-VII**Science Caravan Exhibitions Organized during 2010-11**

FEDERAL UNIT:				
Exhibition Sites	Dates	No. of Days	No. of School	No. of Students
Science Caravan Exhibition at Fatima Public School, Jabbah Dhak	September 28, 2010	01	1	2000
Planetarium Show at Institute of Space Technology, Islamabad	October 04-10, 2010	07	10	1500
Science Caravan Exhibition at Global School System P.O Sohan, Islamabad	December 14-18, 2010	03	5	1500
Science Caravan Exhibition at Govt. Girls High School No. 1 Fateh Jang, Distt. Attock	January 03-07, 2011	05	10	1320
Planetarium Show at SLS Montessori School, G-11/4, Islamabad	January 31-February 01, 2011	02	1	400
Planetarium Show at Ali Trust School & College, Islamabad	February 10, 2011	01	1	350
International EXPO on Biodiversity at Islamabad Model College for Girls F-7/4, Islamabad	January 14-28, 2011	15	35	18000
Planetarium Show at Khaldunia Junior School F-8/2, Islamabad	March 18, 2011	01	1	300
Science Caravan Exhibition at Govt. High School, Rawat Murree	June 27- July 05, 2011	10	16	2482
Total:		45	80	26.650
PUNJAB UNIT:				
Planetarium Show at QURAN Foundation, Faisalabad	July 30, 2010	01	01	200
Science Caravan Exhibition at Govt. crescent model high school, Faisalabad	October 18-22, 2010	06	01	2500

Science Caravan Exhibition at Govt. Comp. Girls Model School, Faisalabad	October 15-20, 2010	06	01	2000
Science Caravan Exhibition at GGHS School, Faisalabad	November 01-05, 2010	06	01	2000
Science Caravan Exhibition at Govt. Kindergarten Girls High School, Faisalabad	November 10, 2010 (World Science Day celebration)	01	01	835
Science Caravan Exhibition at Garrison College of Science, Jhang	November 26-December 04, 2010	09	30	7,500
a) Science Caravan Exhibition at Source College Sambrial, Distt. Sialkot, b) Image College, Daska Distt. Sialkot.	January 02-11, 2011 January 12-18, 2011	10	40	4000
		07	07	2560
International EXPO on Biodiversity at University of Agriculture, Faisalabad.	February 14-26, 2011	12	40	4200
Planetarium Show at University of Agriculture, Faisalabad. (Golden Jubilee week)	March 13-20, 2011	09	-	225
Science Caravan Exhibition at Allama Iqbal Girls Higher Sec. School, Faisalabad	April 11-16, 2011	06	05	2000
Science Caravan Exhibition at Aisha Memorial girls High School, Chiniot	April 18-29, 2011	13	15	1701
Total:		88	141	30,221
SINDH UNIT:				
Science Caravan Exhibition at Govt. Boys/Girls Higher Sec. Schools, Pano Akil.	October 11-29, 2010	19	5	4985
Science Caravan Exhibition at Govt. Boys Higher Sec. Schools, Ubauro	November 04-12, 2010 & November 22-27, 2010	15	6	2925
Science Caravan Exhibition at Govt. Boys/Girls Higher Sec. Schools, Dahrki Distt. Ghotki	December 06-21, 2010	16	13	2792
Science Caravan Exhibition at Govt. Boys/Girls Higher Sec. Schools Satharja & Hengojra, Distt. Khairpur Mirs	January 12-February 03, 2011	23	42	3840

Science Caravan Exhibition at Govt. Boys/Girls Higher Sec. Schools Sobho Dero, Distt. Khairpur Mirs	February 07-15, 2011	09	11	1795
Shah Abdul Latif University, Khairpur (International Expo on Biodiversity)	March 04-17, 2011	14	18	8000
Science Caravan Exhibition at Govt. Boys/Girls Higher Sec. Schools Daur, Distt. Nawabshah	May 02-15, 2011	14	23	2045
Science Caravan Exhibition at Govt. Girls Fatima Jinnah Higher Sec. School, Distt. Shaheed Benazirabad	May 19-June 01, 2011	14	10	2185
Total:		139	128	28,592
KPK UNIT:				
Science Caravan Exhibition at GGCMHS No.1, Abbotabad	August 01-13, 2010	13	10	1429/39
Science Caravan Exhibition at GHSS No. 1, Peshawar	October 11-22, 2010	12	8	2822/68
Science Caravan Exhibition at GGHS Lady Griffith. Peshawar	October 25-November 12, 2010	10	9	1802/42
Science Caravan Exhibition at Hudebia International Model School. Peshawar	November 05-12, 2010	08	10	846/46
Govt. Degree College Abbottabad (International Expo on Biodiversity)	February 01-11, 2011	11	33	2709/160
Participation in disaster management Exhibition University of Peshawar	April 20-21, 2011	02	2	15000
Science Caravan Exhibition at GHS Badrashi, Nowshehra	April 18-26, 2011	09	10	646/28
Science Caravan Exhibition at Working Folks Grammar Higher secondary School. Nowshehra	April 27-May 04, 2011	08	9	1565/42
Planetarium Show at AUPS Agriculture University, Peshawar	April 14, 2011	01	01	372/35
Planetarium Show at New Islamic Cadet School & College, Peshawar	June 07-09, 2011	3	3	760/34

Science Caravan Exhibition at GHS Bher Kund, Mansehra	June 13-22, 2011	13	15	909/47
Science Caravan Exhibition at GHS Dadar, Mansehra	June 23-30, 2011	08	15	847/34
Total:		114	114	29,707 575
BALUCHISTAN UNIT:				
Science Caravan Exhibition at Govt High school (Boys & Girls), Distt. Qilla Saifullah, Muslim Bagh,	August 02-12, 2010	11	10	2610
World Science day	November 10, 2011	01	01	200
Science Caravan Exhibition at Govt High school (Boys & Girls), B Area of Quetta Distt.	October 30-December 04, 2010	25	9	4304
Science Caravan Exhibition at Govt High school (Boys & Girls), Dhadar (Distt. Keachi Bolan)	February 02-15, 2011	13	5	2665
Science Exhibition At Sibbi Mella, Sibbi	March 02-07, 2011	06	-	5500
University of Balochistan International Expo on Biodiversity)	March 22-31, 2011	10	24	7850
Science Caravan Exhibition at Govt High school (Boys & Girls), Yaroo & Saranan Distt. Pashin	May 11-21, 2011	10	05	2476
Science Caravan Exhibition at Govt High school(Boys & Girls), Tehsil Loralai Distt. Loralai	May 26-June 13, 2011	18	09	4036
Total:		94	63	29,641
Grand total:		480	440	145,386

ANNEXURE-VIII

Detail of 20th Intra Board Science Essay Competition, 2010-11

1. BISE Abbottabad

Sr. #	Name of Winner Student	Name & Address of School	Medium	Position	Amount Rs.
1.	Ayesha Imran S/o Muhammad Imran	Hazara PS & College Haripur	English	1 st	5000/-
2.	Haseeb-ur-Rehman S/o Bashir Ahmad	Pakistan Scouts Cadet College Batrasi	English	2 nd	3000/-
3.	Moqarrab Ahmad Mirza S/o Mateen Ahmad	Abbottabad PS & College Abbottabad	English	3 rd	2000/-

2. BISE Mardan

Sr. #	Name of Winner Student	Name & Address of School	Medium	Position	Amount Rs.
1.	Hamid Ikram	Iqra School & College Hoti Mardan	English	1 st	5000/-
2.	Muhammad Aaqib	Iqra School & College Hoti Mardan	English	2 nd	3000/-
3.	Ghazala Shamim Afridi	Presentation Convent School Risalpur Nowshera	English	3 rd	2000/-

3. BISE Sargodha

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Muhammad Touqeer Nazeer S/o Nazeer Ahmad	Dar-e-Arqam Model High School, Sargodha	English	1 st	5000/-
2.	Ayesha Eiman D/o Mehtab Alam	District Public School & Inter College Khushab (Johar Abad)	English	2 nd	3000/-
3.	Faaiza Javed D/o Mhammad Javed Iqbal Khan	Govt. Girls High School, Civil Station, Mianwali	English	3 rd	2000/-

4. BISE Sukkur

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Nida Khan D/o Muhammad Ikramullah Khan	Mari Gas Higher Secondary School Daharki	English	1 st	5000/-
2.	Syed Usman Shah S/o Syed Bishrat Hussain Shah	Hira Public Higher Secondary School Sukkur	English	2 nd	3000/-
3.	Syeda Tooba Fatima D/o Muhammad Mehdi Hasan	Rotary Public School Sukkur Eid Gah Road, Near Municipal Stadium	English	3 rd	2000/-

5. FBISE Islamabad

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Maham Ijaz	Fauji Foundation Model School, Bedian Road, Lahore Cantt.	English	1 st	5000/-
2.	Mariyam Arshad	Army Public School & College, Chinar Campus Murree Cantt.	English	2 nd	3000/-
3.	Zainab Hanif	Army Public School & College, Westridge-III (Girls), Rawalpindi Cantt.	English	3 rd	2000/-

6. BSE Karachi

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Arwa Ismail D/o Muhammad Ismail Usuf	Iqra Huffaz Girls Secondary School F-108, Block-B, North Nazimabad, Karachi	English	1 st	5000/-
2.	Juwairia Asad D/o Asad-ur-Rehman Khan	Hamdard Public School, Karachi	English	2 nd	3000/-
3.	Seham Saleem D/o Saleem-ud-Din Butt	Bahria Model School-II, Majeed S.R.E., Karachi	English	3 rd	2000/-
4.	Mahwish Anwar D/o M. Anwar	Bahria Model School-I, Majeed S.R.E., Karachi	Urdu	1 st	5000/-
5.	Hammad-ur-Rehman S/o Nisar Ahmed	Bahria Model School-II, Majeed S.R.E., Karachi	Urdu	2 nd	3000/-

6.	Javeria Akhtar D/o Akhtar Behram	H.B. Malik Public School, Karachi	Urdu	3 rd	2000/-
7.	Fouzia Maryam D/o Muhammad Ashraf	Iqra Huffaz Girls Secondary School F-108, Block-B, North Nazimabad, Karachi	Sindhi	1 st	5000/-
8.	Hafiza Pareesa Bashir D/o Bashir Ahmed	Iqra Huffaz Girls Secondary School, Tipu Sultan Road, Karachi	Sindhi	2 nd	3000/-
9.	Waqar Laghari S/o Ghulam Mustafa Laghari	Bahria Model School-II, Majeed S.R.E., Karachi	Sindhi	3 rd	2000/-

7. **BISE Faisalabad**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Anum Khaliq S/o Abdul Khaliq	Divisional Public School & College (Girls Section) Faisalabad	English	1 st	5000/-
2.	Asad Nawaz S/o Muhammad Nawaz	Govt. Comprehensive Model High School, Jhang	English	2 nd	3000/-
3.	Muhammad Abdullah S/o Kamran Bashir	Divisional Public School & College (Boys Section) Faisalabad	English	3 rd	2000/-

8. **BISE Gujranwala**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Sumbul Liaqat D/o Liaqat Ali	Federal Science College (Girls Wing) Wapda Employees Town, Gujranwala	English	1 st	5000/-
2.	Muhammad Hamza S/o Muhammad Riaz	Jinnah Public School, Hafiz Hayat, Gujrat	English	2 nd	3000/-
3.	Aqsa Khaliq S/o Abdul Khaliq	Dukhtaran-e-Millat Higher Secondary School, Mandeer, Dinga Road, Kharian, Gujrat	Urdu	3 rd	2000/-

9. **BISE Multan**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Bushra Arshad D/o Arshad Jamil	Govt. Girls Comprehensive Higher Secondary School, Gulgash Colony, Multan	English	1 st	5000/-

2.	Mehwish Murtaza D/o Ghulam Murtaza	Govt. Girls High School, Ward No.8, Mailsi	English	2 nd	3000/-
3.	Shehryar Naeem S/o Naeem Pervez	Divisional Public School and College, Sahiwal	English	3 rd	2000/-

10. BISE Rawalpindi

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Ayesha Afzal	Beacoinhouse School System Educational Complex. Rawalpindi	English	1 st	5000/-
2.	Muhammad Bin Sanaullah	Cadet College Hassan Abdal, Attock	English	2 nd	3000/-
3.	Abubakr Cheema	Cadet College Hassan Abdal, Attock	English	3 rd	2000/-

11. BISE Peshawar

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Ayesha Javaid	Frontier Youth Academy Hayatabad. Peshawar	English	1 st	5000/-
2.	Qaisar Ali Khan	Islamia Collegiate School, Peshawar University	English	2 nd	3000/-
3.	Huma Sher	Frontier Youth Academy Hayatabad, Peshawar	English	3 rd	2000/-

12. BISE AJK Mirpur

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Rubab Bukhari D/o Syed Nisar Hussain Shah	The Guidance House School & College System F-2, Mirpur (A.K)	English	1 st	5000/-
2.	Syeda Amna Batool Kazmi D/o Mubashar Kazmi	-do-	English	2 nd	3000/-
3.	Razi Haider Kazmi S/o Mubashar Kazmi	-do-	English	3 rd	2000/-

13. **BISE Lahore**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	ZArnab Altaf	The Punjab School, Township, Lahore	English	1 st	5000/-
2.	Wasaf Maqsood	Wapda Boys High School Shalimar Town, Lahore	English	2 nd	3000/-
3.	Bakhtawar Aslam	Govt. Comprehensive Girls High School Wahdat Road, Lahore	English	3 rd	2000/-
4.	Iqra Bashir	Govt. Girls High School, Pattoki	Urdu	1 st	5000/-
5.	Saira Rehan	The Landar Half School System, Lahore	Urdu	2 nd	3000/-
6.	Fatima Khalid	The Punjab School, Township, Lahore	Urdu	3 rd	2000/-

14. **BISE Larkana**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Sonia D/o Gulbhar Magsi	Govt. Saint Joseph High School, Larkana	English	1 st	5000/-
2.	Nelish Kumar S/o Kishore Kumar Dhankani	College for Superior Services, Larkana	English	2 nd	3000/-
3.	Hassnain Khan S/o Muhammad Hassan Solangi	Govt. Saint Joseph High School, Larkana	English	2 nd	3000/-
4.	Zulqarnain Ahmed S/o Muneer Ahmed Shaikh	College for Superior Services, Larkana	English	3 rd	2000/-

15. **BISE Kohat**

Sr. #	Name of Winner Student	Name and Address of School	Medium	Position	Amount Rs.
1.	Fariha Zeb	St. Joseph's Convent High School, Kohat	English	1 st	5000/-
2.	Fazeela Kiani	-do-	Urdu	1 st	5000/-
3.	Muhammad Yamnaian	Fauji Foundation Model School, Kohat	English	2 nd	3000/-
4.	Kiran Riaz	St. Joseph's Convent High School, Kohat	English	3 rd	2000/-

ANNEXURE-IX

Detail of 20th Intra Board Science Poster Competition, 2010-11

1. BISE Abbottabad

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Choudhary Hassan Ali S/o Sabir Ali Choudhary	Al Imtiaz Academy Abbottabad	1 st	5000/-
2.	Shumaila Hussain S/o Noor Hussain	GGHS No.2 Mansehra	2 nd	3000/-
3.	Khushbakhat Aali S/o Muhammad Yousaf Baig	Hazara PS & College Haripur	3 rd	2000/-

2. BISE Mardan

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Gulzara Ahmad	Presentation Convent School Risalpur Nowshera	1 st	5000/-
2.	Kiran	Al- Badar Public School Shewa Adda Swabi	2 nd	3000/-
3.	Muhammad Bilal	Govt. High School Bicket Gunj No. 1 Mardan	3 rd	2000/-

3. BISE Sargodha

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Ayesha Khan D/o Muhammad Khan	Govt. Comprehensive Girls High School Sargodha	1 st	5000/-
2.	Ahmad Ghaffar S/o Abdul Ghaffar	Dar-e-Irqam School, Sargodha	2 nd	3000/-
3.	Riham Mehmood Niazi D/o Mehmood Iqbal Niazi	Govt. Girls Higher Secondary School, Kundian	3 rd	2000/-

4. BISE Sukkur

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Salma Idrees D/o Haji Muhammad Idrees	Mari Gas Higher Secondary School Daharki	1 st	5000/-
2.	Muhammad Waqar S/o Muhammad Iqbal	Hira Public Higher Secondary School Sukkur	2 nd	3000/-
3.	Pawan Soona D/o Sanwarya	Pak. Railway High School Sukkur	3 rd	2000/-

5. FBISE Islamabad

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Iram Ashraf	Army Public School & College, Mahfooz Shaheed, Garrison, Lahore Cantt	1 st	5000/-
2.	Nouman Ijaz	Fazaia Inter College, Chaklala Rawalpindi Cantt	2 nd	3000/-
3.	Shiza Majeed	Sir Syed College, Wah Cantt.	3 rd	2000/-

6. BISE Karachi

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Maryam Jawed D/o Jawed Rasheed	Iqra Huffaz Girls Secondary School F-108, Block-B, North Nazimabad, Karachi	1 st	5000/-
2.	Aliza Hafeez D/o S. Hafiz Ullah Azhar	Metropolis Academy Girls Campus, Water Pump, Karachi	2 nd	3000/-
3.	Urooba Masood D/o S. Masood Ahmed	C.S.S. Grammar School, Karachi	3 rd	2000/-

7. **BISE Faisalabad**

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Ayesha Aslam	Laboratory Girls High School Agricultural University, Faisalabad	1 st	5000/-
2.	Dur-e-Adan Aamarah	Govt. Comprehensive Girls High School Madina Town, Faisalabad	2 nd	3000/-
3.	Muhammad Ali Arshad	Govt. Comprehensive Model High School, Jhang	3 rd	2000/-

8. **BISE Gujranwala**

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Sana Nasim	Allama Iqbal Public Girls High School, Masjid Road, Sialkot Cantt	1 st	5000/-
2.	Feroza Neem	Spring Field Public School, Peoples Colony, Gujranwala	2 nd	3000/-
3.	Sajjad Haider	Wazir Hasan Memorial School, Ali Pur Chatt, Gujranwala	3 rd	2000/-

9. **BISE Peshawar**

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Sheroze Stephen	St.Mary School	1 st	5000/-
2.	Zeeshan Saeed	St.Mary School	2 nd	3000/-
3.	Ahsan Imtiaz	St.Mary School	3 rd	2000/-

10. BISE Mutan

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Ramla Harum	Divisional Public Higher Secondary School, Jahanian (Khanewal)	1 st	5000/-
2.	Sumbal Fayyaz D/o Muhammad Fayyaz	Sultana Foundation Girls High School, Multan	2 nd	3000/-
3.	Aamir Shahzad S/o Ameer Hamza	Govt. Fazilka Islamia High School, Pakpattan Sharif	3 rd	2000/-

11. BISE Rawalpindi

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Laraib SAeed	Govt. Girls Higher Secondary School No.2, Muree Road	1 st	5000/-
2.	Faizan Ul Haq	Saddique Public School(for Boys) ASghar Mall Road., Rawalpindi	2 nd	3000/-
3.	Sundas Shoukat	Angle Arabic Public Secondary School, Rawalpindi	3 rd	2000/-

12. BISE AJK Mirpur

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Muhammad Danish S/o Muhammad Ilyas Shakir	Govt. High School Dahri Thothal Mirpur (AJK)	1 st	5000/-
2.	Rafia Shabbir D/o Muhammad Shabbir Raja	Govt. Girls High School F-1, Mirpur (AJK)	2 nd	3000/-
3.	Samreen Jabeen D/o Muhammad Riaz	Govt. Girls Degree College Chaksawari Mirpur (AJK)	3 rd	2000/-

13. BISE Kohat

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Afaq Khan	St. Joseph Convent High School Kohat	1 st	5000/-
2.	Faiza Ashfaq	GGHS Billitang Kohat	2 nd	3000/-
3.	Fariha Zeb	St. Joseph Convent High School Kohat	3 rd	2000/-

14. BISE Larkana

Sr. No.	Name of Winner Student	Name & Address of School	Position	Amount Rs.
1.	Pritiya Kumari D/o Pardeep Kumar Gemnani	OPF Public School Larkana	1 st	5000/-
2.	Moona Mangi D/o Mohammad Rafique	-do-	2 nd	3000/-
3.	Larib Khan S/o Muhammad Khan Soho	-do-	3 rd	2000/-

15. BISE Lahore

Sr. No.	Name of Winner Student	Name and Address of School	Position	Amount Rs.
1.	Sameen Amjad	Workers Welfare School for Girls, 14 Km. Rana Town, Shahdara, Lahore	1 st	5000/-
2.	Fatima Tariq	Govt. Girls Model High School, Okara	2 nd	3000/-
3.	Azbah Ansari	Linderhof Lahore School System Gilrls Branch 11, College Block, Allama Iqbal Town, Lahore	3 rd	2000/-

ANNEXURE- X

List of Schools for Science Clubs

1.	F.G. Boys Middle Model School, Chatta Bakhtawar, Islamabad
2.	F.G. Boys Model School, I-8/1, Islamabad
3.	F.G. Girls Model Middle School, NHC, Islamabad
4.	F.G. Primary School, Frash Town, Nilore Sector, Islamabad
5.	F.G. Girls Sec. School Nur Pur Shahan, Islamabad
6.	F.G. Girls Sec. School Mohra Nagial, Islamabad
7.	F.G. Boys Sec. School, Bhara Kahu, Islamabad
8.	F.G. Higher Sec. School, Tarnol, Islamabad
9.	Islamabad Model College for Girls, G-11/2 Islamabad
10.	Ghazali College for Women Bhara Kahu, Islamabad
11.	Islamabad Model College for Girls, G-10/2 Islamabad
12.	Islamabad College for Boys G-6/3, Islamabad
13.	Islamabad Model College for Girls, F-7/4 Islamabad
14.	Viqar-un-Nisa Girls Higher Sec. School, Rawalpindi
15.	Decent School Bhara Kahu, Islamabad

ANNEXURE-XI

List of Schools/Organizations Provided Financial Assistance in 2010-11

S. No.	Name of Institute	Purpose/Activity	Amount Rs.
1.	College of Electrical & Mechanical College, NUST, Rawalpindi	Prize money for winners of National Engineering Robotics Contest 2010	50,000/-
2.	Adventure Foundation, Islamabad	Sponsorship for 9 th and 10 th Mountain Conservation Meet 2011	100,000/-
3.	Govt Higher Secondary School, Serferja, Khairpur	Purchase of lab equipment	75,000/-
4.	Govt. Nangal Ambai High School No.2, Sahiwal	Purchase of lab equipment	20,000/-
5.	Shah Abdul Latif University, Khairpur Sindh	Purchase of Chemicals & Computers	50,000/-
6.	Pakistan Scout Cadet College, Batrasi, Manshra	Purchase of Computers	50,000/-
7.	Private School Network, Islamabad	For 3 rd National Annual Science Exhibition for Primary & Middle Level	20,000/-
8.	Special Public High School, Winder Balochistan	Purchase of Lab equipment & Computers	50,000/-
9.	Ghulam Ishaq Khan Institute of Engineering & Technology Topi	Sponsorship/Prize money for winners of Thermocon-2011	39,500/-
10.	Govt. High School No.1 Nowshera Cantt.	Purchase of Lab equipment	50,000/-
11.	Shah Abdul Latif welfare Organization,	Organizing Science Competition	25,000/-
12.	Capital Science School, Islamabad	Purchase of Lab equipment	25,000/-
13.	Foundation Public School 612, G-10/4 Islamabad	Purchase of Lab equipment	25,000/-
14.	Govt. High School No. 1 Phool Nagar Distt. Kasur.	Purchase of Lab equipment	50,000/-
15.	Govt. High School Jallozai, Nowshera	Purchase of Lab equipment	50,000/-

16.	Govt. High School. Beerangalli Abbottabad	Purchase of Lab equipment & Teaching Material	40,000/-
17.	Ahmad Abad Model School & College Ahmadabad, Karak	Purchase of Lab equipment	25,000/-
18.	Govt. Higher Secondary School, Jhampir Distt. Thatta	Purchase of Lab equipment	50,000/-
19.	Education Trust Nasra Schools, Karachi	Purchase of Lab equipment	97,000/-
Total			891,500/-

List of Participants, Photographs and Press Clipping of Science Media Forum

A. Print Media Journalists

1. Mr. Hassan Syed, Voice of America Urdu Service
2. Mr. Ali Mustafa Zaidi Paras, Technology Times
3. Mr. Jamal Shahid, Dawn
4. Mr. Rana Amer, Express
5. Mr. Zafar Sipra, Ausaf
6. Ms. Asma Ghani, The Nation
7. Mr. Faheem Anwar, Nawa-i-Waqat
8. Mr. Imran Waseem, News Mart
9. Mr. M.Majid Awan, Sarhad News
10. Ms. Maha Mussadiq, Tribune
11. Mr. Tariq Khattak, Pakistan Observer
12. Mr. Muhammad Khalid, Daily Shariq
13. Ms. Ghazal Khubaib, English Reporting, APP
14. Mr. Tahir Amin, Bussiness Recorder
15. Mr. Ijaz Kaka Khel, Daily Times
16. Mr. Malik Manzoor, Roznama Khaberein
17. Syed Toqeer-ul-Hassan, Daily Kianat
18. Malik Sajid Masood, Roznama Pakistan
19. Mr. Tahir Kayani, Daily Jinnah
20. Mr. Asghar Ali Mubarak, Daily Mail
21. Mr. Matti-ur-Rahman, Urdu Service APP
22. Mr. Jonaid Iqbal, Daily Dawn
23. Mr. Pervaiz Iqbal Mughal, Daily Ausaf
24. Syed Zaigham Naqvi, Express
25. Ms. Nigar Ali, Technology Times
26. Mr. Asghar Ali Mubarak, Daily Mail
27. Mr. Noor Aftab, The News
28. Mr. Shahid Rasheed, Roznama Sahafat

B. Electronic Media Journalists

1. Mr. Hamza Malik, Video Service APP
2. Mr. Murtaza, Business Plus
3. Mr. Hassan Syed, Voice of America Urdu Service
4. Mr. Zarkoon Shah, Geo News

5. Mr. Usman, Aaj TV
6. Ms. Sanam Zahara, Producer Current Affairs, PTV
7. Mr. Zahid Farooq Malik, ATV
8. Mr. Mian Shahid & Aisha Khan, Dunya TV
9. Mr. Tariq Mahmood, ARY
10. Mr. Arif Zaidi, Hum TV
11. Mr. Shaher Yar Khan, Express TV
12. Mr. Nasir Khan, Radio Pakistan
13. Mr. Waseem Malik, SAMAA TV
14. Mr. Bilal Ahmed & team PBC, CPU, Islamabad
15. Mr. Zahid Iqbal, FM-100 Pakistan
16. Mr. Zaheer Abbas, TV1
17. Mr. Idrees, Royal News
18. Mr. Hassan, Channel 5
19. Ms. Kauser Samreen, Programme Manager, PBC
20. Mr. Asad Abbasi, Radio Pakistan News & Current Affairs
21. Mr. Tariq Ismail, Indus TV
22. Mr. Sahib, Sindh TV
23. Mr. Awais Idrees Qazi, Samaa TV, Cameraman
24. Mr. Shakeel Butt, Producer PTV
25. Mr. Zulfiqar Gurmani, KTN
26. Mr. Naveed Anjum, Sohni Dharti
27. Mr. Saeed Ullaha, Producer News & Current Affairs, Radio Pakistan
28. Ms. Sehrish Majeed, Apna TV
29. Mr. Sher Ali, Waqt TV

C. Out Station Journalists

1. Mr. Muhammad Shakeel Malik, PTV News & Current Affairs, Lahore
2. Mr. Wajid Zulqarnain, Senior Producer, Dunya TV, Lahore
3. Mr. Agha Obaid, Chief Editor, Daily Sada-e-Olas, Quetta
4. Ms. Javaria Tareen, Reporter, Samaa TV, Quetta
5. Mr. Jamil Ahmed Soomro, Station Manager APP, Sukkur
6. Ms. Sana Soomro, Reporter, PBC, APP/PTV, Sukkur Region
7. Mr. Qurban Ali Khushk, Bureau Chief Daily Dawn/ Dawn News TV
8. Mr. Tayyab Ajmal, Programme Executive, FM-89, Faisalabad
9. Mr. Adeel Saeed, Associated Press of Pakistan, Peshawar
10. Ms. Shanaz Mehmood, Express TV, Faisalabad
11. Syed Khasif Mohsin, CEO, Reset Switch Audio Visual Productions, Lahore

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The First English Daily of Balochistan

THE BALUCHISTAN TIMES

Editor-in-Chief: Syed Faseeh Iqbal

ABC Certified Circulation

100/NO. 162 Quetta, Jamiat ul Sarw 30, 14 JZAN Friday, June 3, 2011, email: info@baluchistantimes.com, www.baluchistantimes.com, phone: 091-9920000000

Chairman PSF urges media to cooperate for country's uplift and science promotion

QUETTA: The Chairman of the Pakistan Science Foundation (PSF) Dr. Muzaffar Hussain has urged the media to cooperate with the foundation for the country's development and promotion of science.

In his address to the members of the Quetta Branch of the PSF, he said that the foundation is working to promote science and technology in the country. He said that the foundation is working to promote science and technology in the country. He said that the foundation is working to promote science and technology in the country.

Dr. Hussain said that the foundation is working to promote science and technology in the country. He said that the foundation is working to promote science and technology in the country. He said that the foundation is working to promote science and technology in the country.

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Chairman PSF Dr. Muzaffar Hussain (center) with other officials and scientists during a meeting in Quetta.



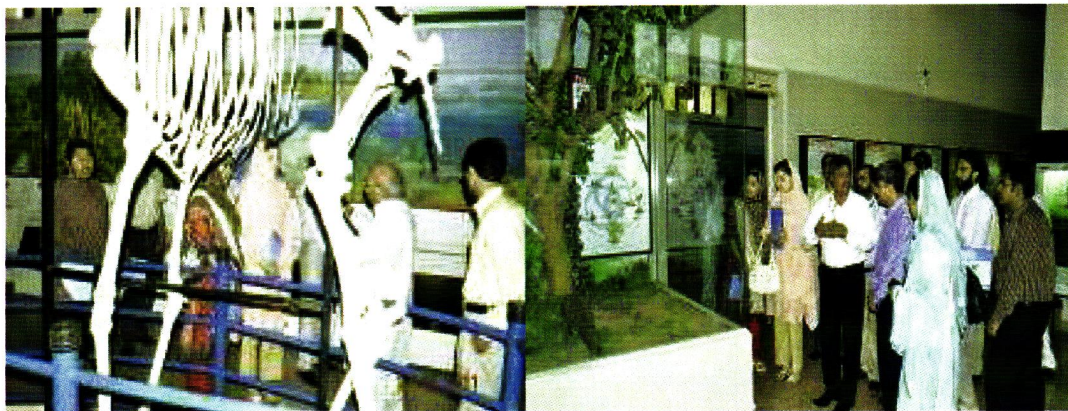
PSF Chairman Prof. Dr. Manzoor H. Soomro presides over the Science Media Forum. Keynote Speaker Dr. Anwar Nasim, PSF Member Science Dr. Khalil Ahmed Ibupoto, PMNH DG Dr. Syed Azhar Hasan and PSF Chief Scientific Officer Ms Farhat Rajpar are also sitting on the stage.



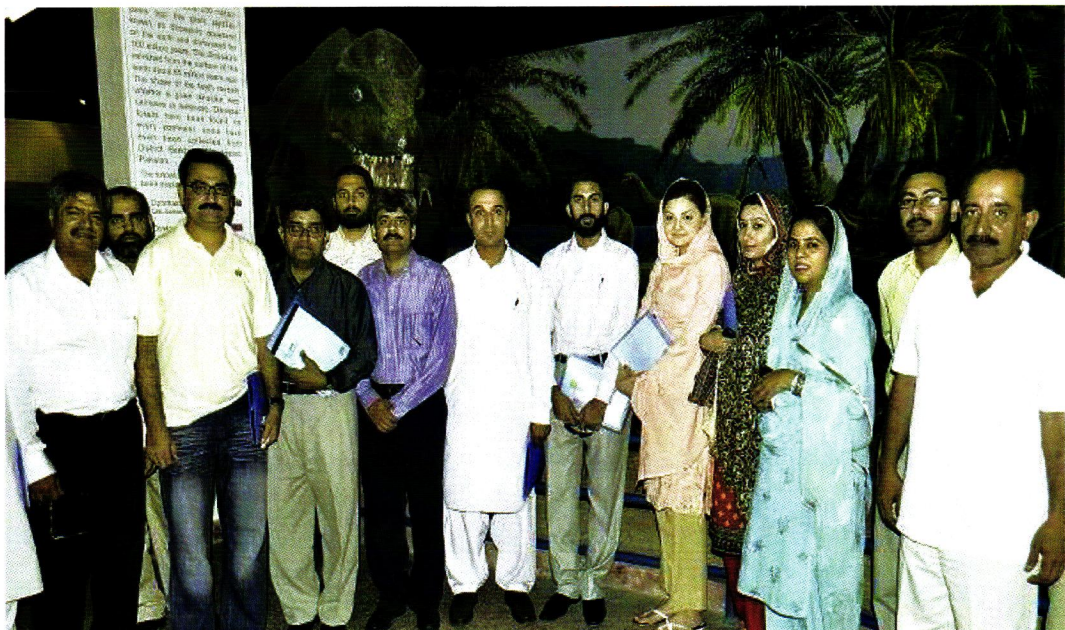
Participants of the Forum take part in an open discussion on "Promotion of S&T Through Mass Media – Ways and Means".



PMNH DG Dr. Syed Azhar Hasan briefs the Media forum participants about PMNH infrastructure and functions.



PMNH scientists explain different exhibits in the Museum Display Galleries to the participants of the Media Forum.



A group photo of the Media Forum Participants with PMNH scientists in the display galleries.



Dr. Anwar Nasim speaking at the Science Media Forum



PSF CSO addresses the Forum.



PSF Member Science addresses the Forum



A group photo of the participants of the Science Media Forum with PSF Chairman Dr. Manzoor H. Soomro



PSF Chairman speaks at the Science Media Forum



PMNH D.G. briefs media persons at PMNH

List of Scientists availed Travel Grants in 2010–11

Sr. No	Name, Address of Applicant	Title of the Conference /Date, Duration & Venue	Amount Released (Rs.)
A- Development Budget			
1.	Dr. Imtaiz Ahmed Abbasi Senior Scientist, Isotopes Production division PINSTECH Nilore, Islamabad. TG (320)/2011	Conference of EPS Yangzhou Orthopedics Forum 2011 held from April 17-18, 2011 at Yangzhou, Jiangsu, China. <i>“Preparation and pre-clinical study of 177 LU –Labelled hydroxyapatite for application in radiation synovectomy of small joints”(Q J Nucl Med Mol imaging available online 03-12-2010</i>	105,037/-
2.	Prof. Dr. Irfana Mariam Principal, Queen Mary College Lahore TG (322)/2011	2 nd International Conference on Biotechnology Engineering (ICBioE’11) held from 17-19 May, 2011 <i>“Solid state fermentation for the production of B-glucosidase by Co-culture of Aspergillus niger and A. oryzae.”</i>	116,973/-
3.	Muhammad Tariq Saeed PhD Student, Faculty of materials Science and Engineering, Ghulam Ishaq Khan Institute of Engineering Sciences and Technology Topi, Pakistan. TG (323)/2011	Saudi International Electronics, Communications and Photonics Conference (SIECPC-2011) held from April 23 to 26 th , 2011, at Riyadh, Saudi Arabia. <i>“Fabrication and Characterization of organic ad nano materials based sensors.”</i>	133,799/-
4.	S. Akhtar Ali Shah Associate Professor, Institute of Geography, Urban and Regional Planning, University of Peshawar. TG (325)/2011	13 th International Conference on Enterprise Information Systems of 2011 (ICEIS’2011)held from 8-11 June, 2011(4days), Beijing Jiaotong University. <i>“System Architecture of the Decision Support System Employing Microscopic Simulation and Expert System in Parallel for the Post Incident Traffic Management”</i>	155,085/-

5.	M. Faisal Murad Senior Registrar, Telemedicine/E-Health Training Centre, Surgical Unit II, Holy Family Hospital, Rawalpindi. TG (328)/2011	Sixteenth Annual Meeting of American Telemedicine Association (ATA) held from 1 st to 3 rd May, 2011, at USA <i>“Technology to Support Cancer services in a Teaching Hospital”.</i>	200,000/-
6.	Shabbir Hussain Lab# 212 H.E.J Research Institute of Chemistry, ICCBS, University of Karachi, Karachi, Pakistan. TG(331)/2011	14 th Asian Chemical Congress 2011 “Contemporary Chemistry for Sustainability and Economic Sufficiency” Bankok <i>“Chlorinated and diepoxy withanolides from withania somnifera and their cytotoxic effects against human lung cancer cell line.”</i>	132,234/-
7.	Prof. Dr. Amir Nawaz Khan, Director, Centre for Disaster Preparedness and Management, Peshawar TG (332)/2011	SAARC Training Program on “Landslide Risk Management In South Asia”. <i>“This grant is requested to attend workshop”.</i>	55,000/-
Sub-Total			898,092
B-Non-Development Budget			
1.	Rana Muhammad Ayyub Assistant Professor, Department of Economics and Business University of Veterinary and Animal Sciences, Lahore. TG(330)/2011	New Development in Theory and Application of Statistics: An international conference in Memory of Professor Moti Lal Tiku held from 2-4 May, 2011 at Ankara Turkey, Technical University <i>“Status of Hilal Meat of Pakistan and Forecasting its Revenue, Opportunities and Implications.”</i>	101,685/-
2.	Dr. Wajid Nasim Assistant Professor, Department of Plant Sciences, Quaid-i-Azam University, Islamabad. TG (337)/2011	2011 International Symposium on Environmental Sciences and Technology (ISEST), held from June 1-4, 2011 Dongguan, Guangdong Province, China, <i>“Simulation of sunflower production in terms of climate change under Environmental conditions of Pakistan”.</i>	192,627/-

3.	Dr. Mubarak Ali Assistant Professor, COMSATS Institute of Information technology, Park Road, Islamabad. TG (338)/2011)	11 th International Conference on Frontiers of Polymers and Advanced Materials held from 22-26 May, University of Pretoria, South Africa. <i>“Growth of Carbon allotropes by using hot filament chemical vapor deposition system.”</i>	177,546/-
4.	Dr. Shahnaz Rashid Full time Cooperative teacher, Institute of Marine Sciences, University of Karachi. TG (340)/11)	International Renewable Energy and Environment Conference (IREEC) 2001 held from 24-26 June, 2011 at the Coronade Hotel, Jalan Water Grenier Kuala Lumpur, Malaysia <i>“BioDiversity of Benthic Fauna and Flora of Sandy Shore of Clifton Karachi along the coast of Pakistan (Northern Arabian Sea).”</i>	124,131/-
5.	Asif Manzoor LT. Col. Asif Zahoor ADRV&F HQ Dog SC (RVF Branch) Quetta Cantt. TG(342)/2011	The 3 rd International Conference on Sustainable Animal Agriculture for Developing Countries held from 26-29 July, 2011 at Nakhoon Ratchasima, Thailand. <i>“Effect of Intermittent lighting on Different Production Traits of Japanese Quail.”</i>	86,475/-
6.	Dr. Sajjad Haider Associate Professor, Institute of Business Administration, Karachi TG (343)/2011	World RoboCup 2011 held from 5-11 July, 2011. <i>“Karachi Koalas – Robot Soccer Team.”</i>	185,521/-
7.	Dr. Ali Raza Gurmani Scientific Officer, Plant Physiology Program CSI, NARC, Islamabad. TG(344)/2011	Framing System on the Loess Plateau Sustainable Development on Food Security held from 14-20 June, 2011 at Lanzhou University, China. <i>“Evaluation of some wheat genetic resources for salinity tolerance.”</i>	138,354/-

8.	Muhammad Shoaib Principal Medical Officer (Associate Professor) Head Department of Medical Sciences, Pakistan Institute of Engineering, Nilore, Islamabad TG (345)/2011	7 th International Conference on Isotopes, held from 4-8 September, at Moscow Russia <i>"Bio-evaluation of 177 Lu-hydroxyapatite for intra-articular application in radiation synovectomy of digital joints"</i>	161,842/-
9.	Dr. M. Ali Abdullah Shah, Assistant Professor National University of Science and Technology, Islamabad. TG(348)/2011	11 th International Conference on Environmental and Agriculture Engineering (ICEAE, 2011) to be held from July 29-31, 2011 at Chengdu, China. <i>"The DNA Immunization aggravated cellular Immune response."</i>	170,569/-
10.	Prof. Dr. Fauzia Yusuf Hafeez BPS-21 Chairman Department of Bioscience, CCIT, Islamabad. TG (351)/2011	Food and Environment 2011 held from June 21-23, 2011 at New Forest U.K <i>"Utilization of Plant associated rhizobacteria to improve plant nutrient and protection: A cast effective and ecofriendly strategy"</i> .	193,093/-
		Sub-Total	1531843/-
		Grand Total	2,429,938