

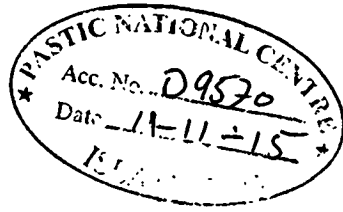
ANNUAL REPORT

2009 – 2010



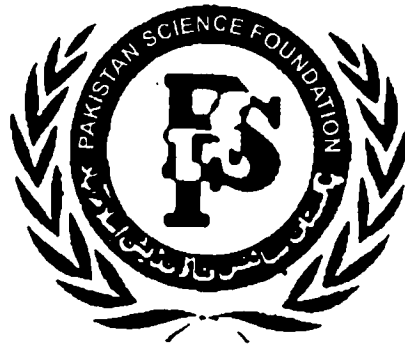
Pakistan Science Foundation

Islamabad



ANNUAL REPORT

2009-2010



PAKISTAN SCIENCE FOUNDATION
1 - Constitution Avenue
Islamabad

PAKISTAN SCIENCE FOUNDATION

CHAIRMAN

Dr. Azhar Hasan	(13.08.2008 to 18.10.2009)
Dr. Manzoor H. Soomro	(19.10.2009 to 25.12.2009)
Mr. Muhammad Fareed Khan	(26.12.2009 to 14.03.2010)
Dr. Manzoor H. Soomro	(15.03.2010 to date)

EXECUTIVE COMMITTEE

Dr. Azhar Hasan	Chairman	(13.08.2008 to 18.10.2009)
Dr. Manzoor H. Soomro		(19.10.2009 to 25.12.2009)
Mr. Muhammad Fareed Khan		(26.12.2009 to 14.03.2010)
Dr. Manzoor H. Soomro		(15.03.2010 to date)
Dr. Azhar Hasan	Member Science	(25.08.2006 to 25.08.2009)
Dr. Manzoor H. Soomro		(25.08.2009 to 18.10.2009)
Dr. S. Shahid Hussain		(19.10.2009 to 04.02.2010)
Syed Ghulam Husnain Bokhari	Director (Finance)	(20.10.2005 to 05.10.2009)

BOARD OF TRUSTEES

Three whole-time members (appointed by the President)

Dr. Azhar Hasan	Chairman	(13.08.2008 to 18.10.2009)
Dr. Manzoor H. Soomro		(19.10.2009 to 25.12.2009)
Mr. Muhammad Fareed Khan		(26.12.2009 to 14.03.2010)
Dr. Manzoor H. Soomro		(15.03.2010 to date)
Dr. Azhar Hasan	Member Science	(25.08.2006 to 25.08.2009)
Dr. Manzoor H. Soomro		(25.08.2009 to 18.10.2009)
Dr. S. Shahid Hussain		(19.10.2009 to 04.02.2010)
Syed Ghulam Husnain Bokhari	Director (Finance)	(20.10.2005 to 05.10.2009)

Sixteen Part-time Members:

1. The Chairman,
Pakistan Council for Science & Technology,
Islamabad

2. Prof. Dr. M. D. Shami, *S.I.*,
Former Chairman, PSF,
House No.299, Street No.14, F-10/2,
Islamabad
3. Prof. Dr. M. Akhtar, FRS,
Director General,
School of Biological Sciences,
Punjab University, Lahore
4. Prof. Dr. Altaf Ali G. Sheikh,
Member (Academics)
Higher Education Commission,
Islamabad
5. Dr. S. M. Junaid Zaidi, *S.I.*,
Rector, COMSATS Institute of Information Technology,
Park Road, Chak Shahzad,
Islamabad
6. Dr. Hameed Ahmed Khan, *H.I., S.I.*
Scientists Emeritus (PINSTECH),
House No.172, St. No.36, F-10/1,
Islamabad
7. Dr. Shahzad A. Mufti,
Advisor,
Department of Bio Medical/Material Sciences
COMSATS Institute of Information Technology,
Park Road, Chak Shahzad, Islamabad
8. Dr. M. Aslam Baig, *H.I, S.I., T.I.*
Department of Physics,
Quaid-e-Azam University,
Islamabad
9. Prof. Dr. Anwar ul Hassan Gilani, *S.I.*,
Department of Biological & Biomedical Sciences,
The Aga Khan University,
Karachi
10. Prof. Dr. Waheed uz Zaman Tariq,
House No.223, Z-6,
Al-Habib Road, Near Technical School, Lal Kurti,
Rawalpindi
11. Dr. M. Anwar Waqar, *S.I., T.I.*,
Dr. Panjwani Centre of Molecular Biology,
University of Karachi
Karachi

12. Prof. Dr. M. Iqbal Choudhary, *(H.I., S.I., T.I.)*
Director
HEJ Research Institute of Chemistry,
Karachi

13. Dr. Rabia Hussain, Ph.D, FRC, Path, *T.I, S.I.*,
Fellow PAMS, TWAS, PAS, IAS
Ghulamali Hirji Professor of Microbiology,
HEC Distinguish National Professor,
Department of Pathology & Microbiology,
The Aga Khan University, Karachi

14. Prof. Dr. M. Qasim Jan, *S.I., T.I., H.I.*,
Secretary General,
Pakistan Academy of Science,
Islamabad

15. Prof. Dr. M. Masoom Yasinzi, *S.I., AF*,
Vice Chancellor,
Quaid-i-Azam University,
Islamabad

16. Dr. M. A. K. Malghani,
Pro-Vice Chancellor,
Baluchistan University of Management Sciences & Information Technology.
Quetta

The Board of Trustees of Pakistan Science Foundation was re-constituted vide Government of Pakistan notification No.1(2)/2003-Elect/PSF dated 24.02.2009 and 27.04.2009 respectively.

CONTENTS

	Page
EXECUTIVE SUMMARY	1
INTRODUCTION	13
CHAPTER-1 ACTIVITIES AND PROGRAMMES	14
1 <u>PAKISTAN SCIENCE FOUNDATION (PSF)</u>	16
1.1 RESEARCH SUPPORT	16
1.1.1 Research Projects funded from non-development budget	16
a. Under process Projects	
b. On going Projects	
c. Completed Projects	
1.1.2 Scientific publications produced through PSF Supported Projects	27
1.1.3 Higher Degrees Earned Through PSF Supported Projects	27
1.1.4 R & D Industry Programme	28
1.1.5 Natural Sciences Linkages Programm (NSLP) Endowment Fund	31
a. Under process Projects	
b. On going Projects	
1.2 SCIENCE PROMOTION	32
1.2.1 Activities funded from non-development budget	32
a. Institutional Support Programme	
b. PSF Fellowships Programme	
c. Financial Assistance for holding of Conferences, Seminars Symposia and Workshops	
d. Support to Scientific Societies/Journals	
e. Inventions & Innovations	
f. Scientific Survey	
1.2.2 Planning and Development Activities	39
A. Development Activities	39
i) On-going Development Project: "Participation of Scientists and Technologists in International Science Conferences, Seminars, Workshops and Trainings Abroad (Phase II)"	

	ii)	On-going Development Project: “Automation of PSF Research Support Programme and other activities”	
	iii)	Development of Science Awareness Programmes for Balochistan:	
	B.	Non-Development Activities	40
	i)	International Liaison	
	ii)	PSF Stall at Disaster Management Exhibition, 2010	
	iii)	PSF as MoST Focal Point for “Establishment of S&T Segment” at National Monument Museum, Islamabad.	
	iv)	Other Activities:	
1.3		SCIENCE POPULARIZATION	42
	a.	Science Carvans (Mobile Science Exhibition)	
	b.	19 th Intra and Inter Board Science Essay and Poster Competitions	
	c.	Science Model Competitions	
	d.	Donation of Scientific Literature to High Schools	
	e.	Financial Assistance to High Schools and other Organizations	
	f.	International Traveling Expo on Environment “The Earths’ Future in Our Hands”	
	g.	Interaction of Students/Faculty members with the Ambassador of France	
	h.	World Science Day for Peace and Development	
	i.	Future Plans	
		PHOTO GALARY	
2.		<u>PAKISTAN MUSEUM OF NATURAL HIISTORY (PMNH)</u>	53
2.1		EVENTS ORGANIZED	53
2.1.1.		World Science Day	53
2.1.2		International Symposium on “Conservation of Plant Genetic Diversity: Recent Techniques	54
2.1.3		Training Workshop on Analysis of Ecological Data	54
2.1.4		Biodiversity Week	54
2.1.5		MoU with Zoological Survey Department, Karachi	55
2.2		VISIT TO PMNH	55
2.2.1		Visit of French Delegation	55
2.2.2		Visit of Secretary Ministry of S&T	56
2.2.3		Visit of Participants of 6 th Mid Career Management Course	56

2.2.4	Visit of Executive Director, COMSATS	57
2.2.5	Visit of Ex-Senator Akram Zaki	57
2.2.6	Visit of Afghan Minister/Senior Advisor to President	57
2.3.	Field Work	58
2.4.	Laboratory Work	58
2.5	Research Publications	59
2.6	Technical Reports	60
2.7	International Collaborative Research Project	61
2.8	National Collaborative Projects	61
2.9	National Research Projects	61
2.10	Design and Display	61
2.11	Guided Tour of PMNH Education Activities	62
2.12	Services Rendered to other Organizations	62
2.13	Meetings/ Conferences/Trainings/Workshops/Attended	62
2.14	Lectures Delivered	63
2.15	Higher Studies	64
2.16	Other Activities	64
	PHOTO GALARY	
3.	PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE (PASTIC)	65
3.1	AIMS AND OBJECTIVES	65
3.2	ACTIVITIES AND SERVICES	66
3.3	Document Procurement and Supply Service	66
3.4	Bibliographic Information Service / Literature Search	68
3.5.	Abstracting and Indexing Service	69
	a. Pakistan Science Abstracts (PSA)	
3.6	Technology Information Service	70
3.7	PASTIC National Science Reference Library	73
3.8	Reprographic Service	73
3.9	International Liaison	76
3.9.1	UNESCO	76
3.9.2	SAARC Documentation Centre (SDC)	76
3.9.3	Bilateral Cooperation	77
3.10	PASTIC Information Service Stalls at the Door Step of Users	77

3.11	Human Resources Development	80
	a. Trainings/ Workshops/Seminars organized	
	b. Lectures / Presentations Delivered	
	c. Meetings/Workshops/Trainings/Attended	
3.12	OTHER ACTIVITIES	85
	PHOTO GALARY	
	NEWS PAPER CLIPS	87
	CHAPTER-2 ORGANIZATION AND ADMINISTATION	97
	CHAPTER-3 AUDITORS' REPORT	105
	ANNEXURES	
	I. Pakistan Science Foundation Act-III, 1973	141
	II. List of Projects Approved During 2009-10	145
	III. Detail of Monitoring and Evaluation of On-Going Projects during 2009-10	151
	IV. Scientific Publications Produced through PSF Supported Completed Project during 2009-10	159
	V. Science Caravan Exhibitions Organized during 2009-10	163
	VI. List of Winner Students of 19th Intra Board Science Essay Competition: Theme: "Science & Islam"	167
	VII. List of Winner Students of 19th Intra Board Science Poster Competition: Theme: "Fuel Resources in the 21st Century"	175
	VIII. Financial Assistance to Schools for Purchase of Lab. Equipment	181

ABBREVIATIONS

Provinces

AJK	Azad Jammu and Kashmir
B	Balochistan
C	Centre
K	Khyber Pakhtun Khawa
P	Punjab
S	Sindh

Institutions

AKU	The Aga Khan University, Karachi
ARIQ	Agriculture Research Institute, Quetta
P-AU	Agricultural University, Faisalabad
BU	Balochistan University, Quetta
BZU	Bahauddin Zakaria University, Multan
CEMB	Centre of Excellence in Molecular Biology, Lahore
CEME	College of Electrical and Mechanical Engineering, Rawalpindi
CEWRE	Centre of Excellence in Water Resources Engineering, Lahore
GCU	Government College University, Lahore
GU	Gomal University, D.I. Khan
KU	Karachi University, Karachi
NARC	National Agricultural Research Centre, Islamabad
NIBGE	National Institute for Biotechnology and Genetic Engineering, Faisalabad
NSFC	National Science Foundation of China
PMNH	Pakistan Museum of Natural History, Islamabad
PINSTECH	Pakistan Institute of Nuclear Science and Technology, Islamabad
P-PU	Peshawar University, Peshawar
P-PU	Punjab University, Lahore
QAU	Quaid- i- Azam University, Islamabad
SALU	Shah Abdul Latif University, Khairpur, Sindh
SIUT	Sindh Institute of Urology & Transplantation, Karachi
SU	Sindh University, Jamshoro
PCCC	Pakistan Central Cotton Committee, Sakrand
PMAS-AAUR	Pir Mehar Ali Shah Arid Agriculture University, Rawalpindi
COMSATS	Commission on Science and Technology for sustainable Development South Asian
COMSTECH	Committee on Scientific and Technology Cooperation

Disciplines

Agr	Agricultural Sciences
Bio	Biological Sciences
Biotech	Biotechnology
Chem	Chemical Sciences
Comp	Computer Sciences
Earth	Earth Sciences
Eng	Engineering Sciences
Envr	Environmental Sciences
Med	Medical Sciences
Phys	Physics

Others

SSGC	Sui Southern Gas Company
NSLP	Natural Sciences Linkages Programme
P.I.	Principal Investigator
NSTC	National Science and Technology Commission
BISE	Board of Intermediate and Secondary Education
PSDP	Public Sector Development Programme
DDWP	Departmental Development Working Party
WWF	World Wildlife Fund

EXECUTIVE SUMMARY

PAKISTAN SCIENCE FOUNDATION (PSF)

Pakistan Science Foundation is the 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 following three broad categories.

i. Science Promotion

To promote basic and applied research in universities and research institutes on scientific challenges & activities related to socio-economic needs/development of the country.

ii. Science Popularization

To increase public awareness about science through science popularization activities by establishing museums, clubs, herbaria, planetaria, etc.

iii. Science Centres

To establish centers for comprehensive scientific and technological information systems and services.

Some of the activities pertaining to these objectives 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 the 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 relevant to socio-economic development of the country. During 2009-2010, a total of 267 research projects in the fields of Agriculture, Biology, Biotechnology, Environmental Sciences, Chemistry, Computer Sciences, Earth Sciences, Engineering, Medical Sciences and Physics remained under consideration. Among these, 143 projects were under process, of which 22 costing Rs. 28.98 million were sanctioned, whereas, 122 research projects remained in pipeline for further processing. A total of 124 projects were on-going and

an amount of Rs. 28.60 million was released on account of due installments for smooth running of these projects.

Final reports of 05 research projects were adopted by the respective Technical Committees and accordingly the accounts of these projects were settled and their files closed. One of the main achievement and usefulness of any research is the publication of its results in scientific journals. Based upon the results of completed projects, 17 research papers were published in national/international journals. In addition, 04 Ph.D and 12 M.Phil/M.Sc (Hons) degrees were awarded to the Research Associates employed in these projects.

Focusing on the collaborative research and strong industrial linkages, R&D–Industry Programme (previously called Industrial Linkages Programme) is bringing together researchers, end-users and the funding institution on one platform to create an environment of a unified approach to identify and solve industrial problems through applied research and technology transfer mechanism. Under this programme, an amount of Rs.1,447,000/- was released to an ongoing project entitled “Indigenous Development of Formulation of Radiation Compatible Polypropylene for Industrial Manufacture of Medical Disposable Syringes”. Research and technical work on project entitled “Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders” was completed. Efforts remained underway to identify and initiate more projects of industrial nature for socio-economic development of the country.

NATURAL SCIENCES LINKAGES PROGRAMME ENDOWMENT FUND

During the year 2009-10, the NSLP was established as a section in the Foundation and permanent staff was recruited for proper functioning of the section. A meeting of NSLP Technical Committee was held and a total number of 11 Research Projects were presented for recommendations of the Committee. The Committee recommended 06 project proposals for funding under the Endowment fund.

Three progress reports were also presented to Technical Committee which were noted as satisfactory. During the report period, an amount of Rs.2.55 million was released on account of due installments and evaluation fee of ongoing projects.

SCIENCE PROMOTION ACTIVITIES

1. Institutional Support Programme:

One of the functions of the Foundation is to support the weak R&D Organizations/Universities to strengthen their laboratories for quality research. During the report period, an amount of Rs. 0.437 million was released to PMNH, Islamabad for purchase of equipment/chemicals for enhancement of its research capabilities.

2. Financial Assistance for holding Science Conferences, Seminars, Symposia and Workshops:

The Foundation also provide funding for holding conferences/seminars/symposia/workshops, etc. to promote and disseminate knowledge generated through research by national and international researchers. During the year 2009-10, an amount of Rs. 1.09 million was released to various institutions for organizing 21 conferences, seminars, and workshops on important scientific topics.

3. Financial Support for Scientific Societies for holding Scientific Conferences and Publication of Scientific Journals:

The Foundation provides funds to 32 registered Scientific Societies for holding their regular conferences, meetings and publication of scientific journals in various disciplines. During the period, an amount of Rs. 2.360 million was released to 19 societies/journals.

4. Awards and Fellowships:

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 to carry out their research at concerned organizations and obtain relevant degrees. During the year, Rs. 0.198 million were paid to 3 Ph.D/M.Phil students on account of research fellowships for carrying out research at their parent institutions. The Foundation has also instituted a prestigious award of "Z.A. Hashmi Gold Medal" in the honour of its Founding Chairman. The medal is awarded to the best researcher selected on the basis of results achieved under PSF Supported research projects. The cash of Rs.100,000/- is also awarded alongwith medal. During report period, 2 medals were prepared for 2 winners.

5. Financial Support for Inventions and Innovations:

Under this programme, 4 teams of engineering students from GIK, UET, Lahore and NUST, Islamabad were co-sponsored for designing and fabrication of their model cars for participation in the International Competition, "Shell Eco-Marathon 'Asia, 2010" held in July, 2010 in Malaysia and an amount of Rs.1.00 million was released. These kinds of competitions explore the potential of future technologies in terms of appropriate designing and efficient fuel consumption.

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.0.1 million was released to PCSIR, Karachi for a scientific survey entitled "*Ground -water Sampling Survey in the Thar Desert Areas of Sindh Province*".

7. International Liaison

Liaison with International scientific organizations in different countries serve as a means to try and solve various scientific problems by sharing knowledge, exchange of expertise and by undertaking collaborative research projects.

PLANNING AND DEVELOPMENT ACTIVITIES:

The following development projects remained ongoing during the report period.

- i. Participation of Scientists and Technologists in International Science Conferences, Seminars, Workshops and Trainings Abroad (Phase II)**
- ii. Automation of PSF Research Support Programme and Other Activities**
- iii. Development of Science Awareness Programmes for Balochistan:**

Under "Aghaz-e-Haqooq-e-Balochistan Package" and "Kohulo Development Package", PSF has planned to prepare development projects for Establishment of Two Science Centres and Science Clubs in 50 High Schools of Balochistan.

- iv. Revival of Activities under MoU signed between PSF and NSFC China:**
- v. Establishment of ECO Science Foundation:**

- vi. **PSF Stall at Disaster Management Exhibition, 2010:**
- vii. **PSF as MoST Focal Point for “Establishment of S&T Segment” at National Monument Museum, Islamabad.**
- viii. **Other Activities:**

SCIENCE POPULARIZATION

Need of promotion and popularization of science and technology for economic growth and for improving the quality of life of a nation can never be denied. Even so, a rational use of science and technology has also contributed to the current environmental, social and economic problems faced by humanity in the 21st century. Most of the PSF science popularization programs were initiated in 1987-88 under the action plan of the National Science Policy 1984. 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. These activities involve the individuals in the excitement of Science, in order to increase their understanding about science through the use of interactive exhibits and every day examples. Brief of the activities undertaken during the report period is given below;

Science Caravan: A Mobile Science Exhibition unit that has been designed to increase public awareness about science and to motivate the younger generation towards science study. At present, nine Science Caravan Units are in operation, two in each of the four provinces and one is stationed at Islamabad. All Caravan Units continued their activities throughout the report period and organized Caravan Exhibitions in 37 centres for 439 days in various schools countrywide. More than 1,08,502 students of 539 Schools visited these exhibitions.

International Traveling Expo on Environment “The Earths’ Future in Our Hands”: Organizing S&T Fairs and Expos is one of the important science popularization programs of the Foundation. During 2009-10, PSF in collaboration with French Embassy in Pakistan organized International Traveling Expo on Environment “The Earth’s Future in our Hands” in Islamabad, Abbottabad, Sukkur and Multan w.e.f. Oct 02 to Dec 16, 2009. It was provided to PSF free of cost by the French counterparts for three months. Further, a “Training Workshop”

for Master Trainers, was also organized at Islamabad Model College for Girls, F-7/4, Islamabad from Sep 29 to Oct 1, 2009. Mr. Pierre Beauvallet (Creator of the Expo) Scientific, Technical, Industrial and Cultural Centre (STICC), France conducted the Workshop. H.E. Mr. Daniel Jouanneau, Ambassador of France to Pakistan, and Senator Muhammad Azam Khan Swati, Federal Minister for Science & Technology jointly inaugurated the Expo. More than 23,000 students, teachers and general public visited the Expo. The Expo was aimed to signify the importance of environment and inculcate the extent to which we can transform our environment by learning its various fascinating phenomenon, and to raise student's awareness of the urgency to act if we are to save our earth for our future generations.

French Embassy Interaction: PSF arranged interaction of introductory programme for Students and Faculty Members of BZU with H.E. Mr. Daniel Jouauneau, Ambassador of France to Pakistan on 16 December 2009 at BZU, Multan. The Chairman, PSF accompanied the Ambassador in the session. About 900 students and 100 faculty members participated in this two hours programme.

Science Essay and Poster Competitions: PSF in collaboration with BISEs organized 19th Intra Board and Inter Board Science Essay and Poster Contests. Thousands of students from all over the country participated in the competitions. The theme of the year for Essay Competition was "Islam & Science". The competition was organized in three languages (English, Urdu & Sindhi). At intra Board level sixty-two students were selected as winners. Final contest (Inter Board) was organized by PSF at Islamabad, in which panel of Experts evaluated the essays for the best three positions in each language. Cash prizes were awarded to the winner students at Intra and Inter Board levels.

The topic of 19th Science Poster Competition was "Fuel Resources in the 21st Century". Forty-eight students were declared as winners of Intra Board Competition. Final contest (Inter Board) was organized by PSF at Pakistan National Council of the Arts (PNCA), Islamabad. A panel of judges consisting of the artists and scientists evaluated the posters for the best three positions. The Director General, PNCA was the Chief Guest at this occasion. Cash prizes were awarded to the winner students.

Donation of Magazines and Books: A Donation of Popular Science Magazines and Scientific Books is one of the regular and important activities of Science Popularization section. 18,000 copies of Popular Science magazine “Monthly Global Science” were acquired and donated to 1500 schools during the report period. In addition, about 13,000 copies of scientific brochures were also distributed among the students. 75 copies of the Scientific Journal “The Fountain” published by “The Light Publishing, Turkey” were procured and provided to Caravan offices, PASTIC and PMNH.

Financial Assistance: Financial Assistance to High Schools working in the Government Sector, specially in the rural areas of Pakistan for strengthening of their Science Laboratories is one of the activity. PSF also helps other S&T organizations in organizing such activities. During the report period, an amount of Rs.910,000 was sanctioned to 19 schools and S&T organizations for the purpose.

World Science Day for Peace and Development (WSDPD): November 10 of each year is celebrated as WSDPD was proclaimed by UNESCO during the General Conference in 2001. PSF arranges a number of programs for commemoration of the World Science Day for Peace and Development (WSDPD). In this connection, PSF Science Centre, Faisalabad organized science exhibition and speech competition on “Science for Peace and Development” w.e.f. 10-14 Nov., 2009 at Science Centre, Faisalabad. In addition, Dr. G.A. Raza Bhatti and Syed Mohsin Raza delivered their talks on the “Use of Science for Better Environment” and addressing environmental issues on Nov, 10 at Govt. High School Sukkur.

PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)

The main objectives of PMNH include research and public education on the natural resources of the country. During the year, PMNH organized a Symposium on “Conservation of Plant Genetic Diversity Recent Techniques” and the Training Workshop on “Modern Techniques for the Analysis of Ecological Data”. PMNH also arranged a weeklong educational activities of “Biodiversity Week” to celebrate 2010 as International Year of Biodiversity declared by the United Nations, during which, Media workshop, Art competition, Speech competition and Quiz competition were arranged. Further, MoU was signed with Zoological Survey

Department, Karachi to receive thousands of specimens. Important visitors included 2-member delegation comprising Embassy of France in Islamabad and the Trainer from Scientific, Technical, Industrial and Cultural Centre (CCSTI), France; Mr. K. B. Rind, Secretary Ministry of Science & Technology; participants of the 6th Mid Career Management Course designed for BPS-18 officers of various occupational groups and the faculty members of National Management College; Executive Director, COMSATS; Mr. Akram Zaki, ex-Senator and former Secretary Foreign Affairs; and Afghan Minister and Senior Advisor to the President on Mines and Energy.

PMNH scientists conducted field studies in various localities of Sindh, Punjab, KPK, AJK, and the Northern areas of Pakistan. Some 30,000 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 depository. Research carried out by PMNH scientists resulted in the publication of 19 research articles in reputed national and international journals. One international collaborative research project with Switzerland is continued, two national research projects were completed and two are continued.

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 the researchers. It is one of the few public sector organizations which has acquired ISO: 9001: 2000 Certification.

PASTIC National Centre is housed in its own building at Quaid-i-Azam University, Islamabad with comprehensive collection of publications in various fields of Science and Technology. It has 6 Sub-Centres at Karachi, Lahore, Peshawar, Quetta, Faisalabad and Muzaffarabad.

Main objective of PASTIC is to acquire, process and disseminate information in all disciplines of Science and Technology. To meet this objective, PASTIC develops inter-library cooperation for sharing resources, establishes and maintains links with international/regional information networks/agencies and provides training to information professionals in modern information handling and management techniques. Collaborations with different organizations and agencies enhance the scope of PASTIC information services that are offered to clients and help PASTIC in responding to the diverse needs of a broad community of users.

Major achievements and some new initiatives during 2009-10 are summarized below:

A number of PASTIC stalls were organized inside various universities to bring S&T information to the doorstep of the researchers. PASTIC boxes were also placed in some libraries and PASTIC posters and leaflets were distributed to university departments. These efforts proved very successful and the number of users were increased and a large number of new research scholars and faculty members came to know about PASTIC information services. A total of 31 stalls were arranged at various departments of 14 universities in several major cities, 08 R&D organizations/institutes and at some conferences/seminars.

Selective Dissemination of Information (SDI) was initiated for R&D Projects.

During the year, development and updating of in-house databases such as Database of Scientific Societies of Pakistan; Database of S&T/R&D Organizations; Database of the Libraries of S&T and R&D Organizations of Pakistan; Database of the S&T Seminars/Conferences organized in Pakistan (2000 onward); Database on completed and on going S&T projects in Pakistan (2000 onward) remained in progress.

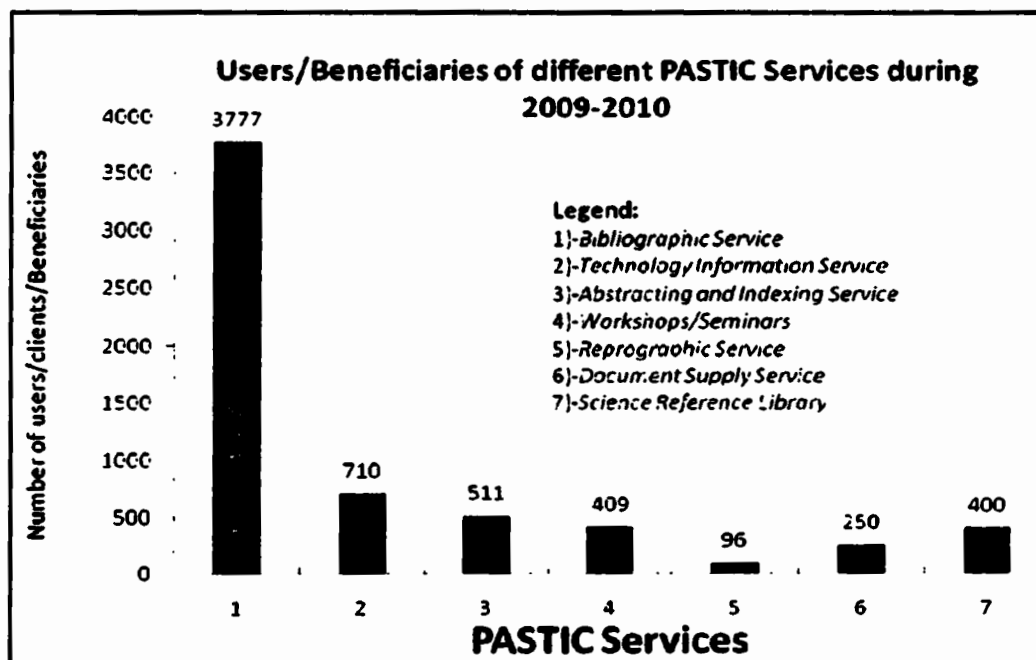
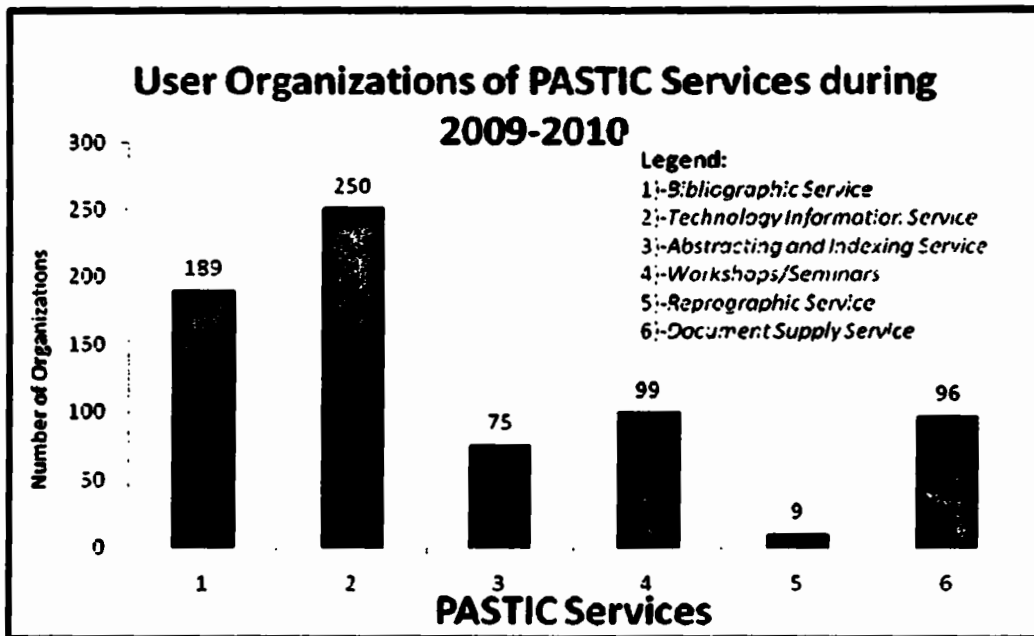
Under regular activities, a total of 1484 articles were supplied to 511 researchers under the Document Supply Service, whereas 6,10,528 references/abstracts from International Bibliographic Databases, both online and offline in all major disciplines of Science and Technology were supplied to 3777 researchers/users on their request under the Bibliographic Information Service.

PASTIC publishes an abstracting journal entitled "Pakistan Science Abstracts" (PSA) in 10 different scientific disciplines as secondary source of information on regular basis. During the period, Pakistan Science Abstracts (PSAs) 2009 were published in all ten disciplines and were distributed among S&T / R&D organizations and academic institutions as a part of information dissemination activities.

The Trade and Technology Database developed by Technology Information Section, was updated. Six issues of bimonthly Trade and Technology news e-bulletin entitled "Technology Roundup" were published online. Seminars on Technology Information Service for promotion of industrial activities were organized at the Chambers of Commerce & Industry in Rawalpindi, Faisalabad and Peshawar.

PASTIC houses the Science Reference Library which has a collection of more than 8,600 books, over 1550 titles of journals (278,500 issues) and 9000 miscellaneous documents and reports. During the year, 710 users visited PASTIC Library for reference purpose, reading and photocopying services. Besides, the library received 636 issues of national and international journals in exchange of Pakistan Science Abstracts, under international cooperation activities and on gratis basis, which contributed to a considerable extent for strengthening of information resources of PASTIC. In addition, 95 books, 75 reports, miscellaneous documents, etc., were acquired, processed and shelved for use. Under other library activities, Bulletin of Fresh Arrivals was published regularly for current awareness purpose.

Under Reprographic Service of PASTIC, 96 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 the year 2009-10, information/data received from these organizations were disseminated among the

relevant institutions and professionals. Besides, efforts were made for availing the training opportunities offered by SAARC Documentation Centre.

PASTIC also organized 8 workshops and seminars on different themes pertaining to S&T information handling and dissemination such as Recognizing & Respecting Intellectual Property Rights: Awareness & Issues (Islamabad), Value Addition in Industrial Activity through S&T Information and R&D Facilitation Services of PASTIC / PSF (Faisalabad), Library Management (Sargodha), Current Good Manufacturing Practices in Pharma Industry (Peshawar), Library and Information Management (Khairpur), Awareness of PASTIC Information Services (Tandojam), Information Security through Selection of Right Information Technology (IT) Management Framework (Islamabad), Awareness of PASTIC Information Services (Uthal, Lasbella).

In view of the information role that it play in research and development activities particularly Industrial Growth and Development, Trade Promotion, Business Development etc., two MoUs were signed by PASTIC; one with Institute of Research Promotion (IRP), Lahore and the other with Rawalpindi Chamber of Commerce and Industry (RCCI), Rawalpindi. The objective was to bridge the gap between the industry and research institutions for promotion of research and development culture in the country.

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. 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, seminars and workshops.
- 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 economy of the country.
- 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 given in the chapters that follow.

CHAPTER – 1

ACTIVITIES & PROGRAMMES

The activities and programmes undertaken by the Foundation for the performance of its statutory functions can be broadly divided into the following four categories:

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

The first activity is carried out through **Pakistan Scientific and Technological Information Centre (PASTIC)**, a subsidiary organization of PSF. The other functions i.e., research support and science popularization etc., are performed by the Science Wing of the Foundation. Functions of the Science Wing of PSF are further subdivided as under:

Science Promotion Section is performing the following activities:

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

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

In addition to PASTIC, the other subsidiary organization of PSF is the **Pakistan Museum of Natural History (PMNH)**, 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.

The progress of the work carried out by the Science Wing of the Foundation, PMNH and PASTIC during the year 2009-2010 is summarized in the following pages.

1. PAKISTAN SCIENCE FOUNDATION (PSF)

1.1 RESEARCH SUPPORT

1.1.1 Research Projects Funded from Non Development Budget

Research Support (Science Promotion) is the principal programme of Pakistan Science Foundation for the promotion of basic and applied research, having relevance to the socio-economic development of the country. Therefore, projects of both basic and applied nature are supported by the Foundation. 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 and budget. 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, 267 research proposals remained under active consideration of the Foundation. Out of these, 143 projects were under-process and 22 of these were approved by the Foundation at a total cost of Rs. 28.98 million (Annexure-II) and Rs.11.733 million were released on account of first installments of these projects.

b. On-going Projects:

During the period 124 research projects were remained on-going and 75 progress reports (semi-annual, 1st and 2nd annual & final) of these projects were received. Semi-annual reports were scrutinized by PSF staff, whereas the annual and final reports, after initial scrutiny, were sent for evaluation to the subject experts to assess the interim progress of the projects. 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.16.867 million was released on

account of due installments and evaluation fee of these ongoing projects. A list of the semi-annual and annual reports is given in Annexure-III.

c. Completed Projects:

Five (5) research projects were completed during the year. The subject experts evaluated the final technical reports of these projects, which were subsequently placed before the respective PSF Technical Committees for consideration. After adoption of these reports by the Committee, the accounts of these projects were settled and files were closed. A list of the completed projects followed by their scientific output is given below:

i) List of Completed projects:

S. No.	Projects No.	Project Title
1.	P-AU/Agr (316)	Survey, biology and integrated control measures of citrus slow decline and spreading decline litchi in Punjab.
2.	P-AU/Agr (318)	An efficient and economic means of enhancing wheat yield under water deficit conditions: use of osmoprotectants.
3.	S-PCSIR/Chem (292)	Economic viability of pesticidal residues and PCBs free fishery products.
4.	S-ZMU/Med (238)	Association of inflammatory cytokines and adipocytokines to glycemic control and blood lipid levels in ischemic stroke patients.
5.	C-PU/Phys(131)	Nonlinear electromagnetic wave propagation in plasma like media

ii) Summaries of Completed Projects:

Project No.	P-AU/Agr (316)
Project Title:	Survey, biology and integrated control measures of citrus slow decline and spreading decline litchi in Punjab.
Duration:	3-Years
Date of Initiation:	14.02.2006
Date of Completion:	13.02.2009
Final Report Received:	15.04.2009

Location of Scheme: University of Agriculture, Faisalabad
Principal Investigator: Dr. Nazir Javed
Total Expenditure: Rs. 293,060/-

Main Objectives:

- To improve the quality and quantity of citrus by developing an integrated strategy to overcome slow decline of citrus and spreading decline of litchi orchards
- To keep the nematode population below economic threshold level for better yield of good quality.

Summary of work done:

Pakistan is among the leading citrus growing countries of the world and earns substantial amount of foreign exchange annually but unfortunately, citrus industry is mainly confronted by decline generally caused due to the large number of insect/pest, disease and disorders. Among these, citrus nematode (*Tylenchulus semipenetrans*) has become one of the serious constraints for citrus production. The present project was planned to study the biology, ecology and integrated management of citrus slow decline and spreading decline of litchi in Punjab. Resultantly, during survey of citrus orchards of Punjab, it was observed that citrus nematode *Tylenchulus semipenetrans* was found to be the pre dominant species associated with citrus plantation. The result revealed that there was about 65.92% disease incidence in Rahim Yar Khan, 62.20% in Bahwal Pur, 61.73% in Multan, 77.43% in Sargodha, 81% in Sahiwal 84% in in Kot Momin and 75.55% in Bhalwal. A maximum infestation of 84% was observed in Kot Momin followed by Sahiwal 81%. About 30% of citrus orchards were found to be entirely free of nematode infestation. While surveying the citrus nurseries, it was observed that those nurseries whose age was more than four year and they were planted in soil were infested with nematodes whereas protected nurseries were more safe. However, the survey of litchi orchards indicate that none of the sample was infested with any of the style bearing nematode but with repeated efforts some soil born fungi were isolated from the surveyed samples. The results of this artificial inoculation of various group of nematode (*M. incognita*, *T. semipenetrans*, *Paratylenchus* spp. and cyst nematode) in litchi seedlings indicate that these nematodes are not found to be associated with root of litchi.

The influence of temperature fluctuation on the population dynamics of *T. semipenetrans* showed that temperatures below 20°C are not favorable for the development and reproduction of nematodes and it was observed that the weed host in the citrus orchards were not supporting the survival and reproduction of *T. semipenetrans*. Results regarding biology of citrus nematodes revealed that its life cycle was completed over 4 weeks at a temperature 23-35°C. While screening the 13 root stocks, it was observed that three root stocks were resistant, two moderately resistant, three moderately susceptible and five were susceptible. *Carrizo citrang*, Citromela and Grape fruit were resistant. *Sachton citrumelo* and *Savageage citrange* were moderately resistant and *Gadi dahi*, *Yuma citrange* and *Kharana khata* were moderately susceptible, whereas, root stocks of Bitter sweet orange, Brazillian sour orange, Sour orange, Chakotra, Rough lemon were found to be susceptible. None of the root stocks showed immune reaction. Among the seven organic amendments; taramera cake and mustard cake showed highly significant result against *T. semipenetrans* under green house condition while the application of biopesticides and carbufuran revealed that the decrease in nematode population after one month of application remained non-significant. Results regarding different levels of pH, maximum *T. semipenetrans* was observed at pH 7.4, but at pH of 5.5-6.0 or below 5.5 its population was reduced. From the results of application, it was observed that *P. lilacinus* show good results as bio-control agents in the management of citrus nematodes and it give the maximum reduction in the nematodes population followed *T. harzianum*. Combination of bio-control agent and nematicides (carbufuran) was more effective for the management of *T. semipenterans* and the results obtained indicates that *P. lilacinus* along with taramera (O.A) & carbufurn (nematicide) gave maximum reduction (71%) and *P. lilacinus* along with taramera (O.A) which was 62%. The results of soil solarization experiment revealed that the treatments means regarding nematode population were significantly affected by the application of polyethylene plastic sheet (transparent or black) while the time of application and its interactive effect with all treatments remained non significant. Under the field conditions, while meaning citrus slow decline by the integration of farm yard manure with other products indicate that the maximum mortality percentage (71.75) was observed when farm yard manure was mixed with nematicide (rugby) and fertilizer (NPK) followed by FYM+Rugby with 60% mortality; it is therefore recommended that the different management strategies should be applied with integration of each others.

Project No.	P-AU/Agr (318)
Project Title:	An efficient and economic means of enhancing wheat yield under water deficit conditions: use of osmoprotectants.
Duration:	3-Years
Date of Initiation:	01.07.2006
Date of Completion:	30.06.2009
Final Report Received:	11.08.2009
Location of Scheme:	University of Agriculture, Faisalabad
Principal Investigator:	Dr. Muhammad Farooq
Total Expenditure:	Rs. 449,667/-
Main Objectives:	

- To study the effect of exogenously applied osmoprotectants as seed treatment on the germination seedling growth and vigor under drought.
- To investigate changes in leaf water relations and photosynthetic capacity and changes in protein patterns of wheat leaves under the application of osmoprotectants under drought at different growth stages.
- To analyse the effect of osmoprotectants on the yield and yield components under drought and to establish correlations between the effect of osmoprotectants and yield parameters
- Recommendation of suitable doses of osmoprotectants as seed or foliar application for improving wheat yield under drought.

Summary of work done:

Different strategies are currently being used for the improvement of drought tolerance of major food crops. Of them, exogenous application of growth promoters, osmoprotectants and antioxidant compounds through different means such as pre-sowing seed treatment, application through rooting medium or as a foliar spray is considered as shortgun approaches to alleviate the adverse of drought on crops. Glycinebetaine (GB), proline and trehalose are the important organic osmolytes that mainly take part in plant osmotic adjustment that ultimately controls plant growth, transpiration rates, stomatal regulation, photosynthesis, ion uptake and transport. In view of some earlier reports, it was hypothesized that exogenous application of these osmolytes could induce abiotic stress tolerance in plants. Therefore, two

independent experiments were conducted in the Botanic Gardens of the Department of Botany, University of Agriculture, Faisalabad, in which, these osmolytes were applied through different modes at one or different growth stages to assess whether exogenous application of these organic osmolytes through different ways could mitigate up to what extent, at which concentration and at which growth stage, the adverse effects of water stress on plant growth and grain yield in wheat. In the first experiment, osmolytes were applied through the seed soaking or as a foliar spray to wheat plants of all wheat cultivars grown in plastic pots filled with sandy loam soil under greenhouse conditions. Tween-20 (20%) was used as a surfactant for foliar spray. After two weeks of imposition of water stress, different concentrations of these osmolytes were exogenously applied as a foliar spray to wheat plants at the seedling, tillering and grain filling stages when grown under non-stress or water stress conditions (60% field capacity). In the 2nd experiment the same concentrations of these osmolytes were applied under field conditions.

In view of the result obtained from all greenhouse and field experiments, it is evident that water stress caused a reduction in growth and yield of all wheat cultivars. Cultivar-S-24 showed better growth than the other cultivars under non-stress and water stress conditions as compared to the other cultivars. Exogenous application of GB and proline were proved more effective as compared to trehalose. It can be concluded that the effective concentrations of exogenously applied osmolytes through seed soaking or through foliar application were cultivar- and growth-specific for promoting growth of wheat cultivars under stress and non-stress conditions. The effectiveness of different concentrations of these osmolytes was associated with increased photosynthetic rate under non-stress or drought stress conditions. This increase in photosynthetic rate due to exogenous application of different osmolytes was associated with some non-stomatal factors. Water stress-induced reduction in water potential was partially alleviated by the exogenously applied organic solutes which suggest a role of these osmolytes in osmotic adjustment. Exogenously applied organic solutes through different modes caused an increase in stomatal conductance with a subsequent increase in transpiration rate, which in turn reduced plant water status of both cultivars.

Overall, exogenously applied different compatible solutes as a seed treatment or foliar application caused an increase in growth of all five wheat cultivars under non-stress conditions. Although exogenous application of these osmolytes through different modes caused changes in gas exchange characteristics, plant water relations, nutrient uptake and yield attributes of wheat cultivars, they induced drought tolerance in the wheat cultivars.

Project No.	S-PCSIR/Chem (292)
Project Title:	Economic viability of pesticides residues and PCBs free fisheries products.
Duration:	02-Years
Date of Initiation:	01.07.2006
Date of Completion:	30.06.2008
Final Report Received:	15.09.2008
Location of Scheme:	Centre for Environmental Studies, PCSIR Lab. Complex, Karachi
Principal Investigator:	Dr. Alia Bano Munshi
Total Expenditure:	Rs. 305, 255/-

Main Objectives:

- To standardize permissible limit of different pesticides in marine fisheries through detecting their level.
- To control pesticide and PCBs contamination of fisheries which cause various health hazards world over, by their detection thus improving the quality of exportable fisheries.
- To access by survey the various localities of Karachi for the cause of disease due to contaminated fisheries.

Summary of work done:

The Karachi coastline which stretches over 135 Km, is facing pollution due to a combination of industrial, port, municipal, transportation activities and shipping process.

Moreover, port authorities are ill-equipped and inadequate trained to recognize other hidden toxic dumping activities, such as dumping toxic waste in sea or by leaving wrongly labeled containers on land.

The nature of the project was to develop a system for regular analytical facility to improve the quality of fishery for export. Pakistan's total seaborne trade is about 32-million tons per year and is expected to maintain an average growth rate of about 4.5 percent per annum. Exporters of fishery products are under stress due to following Problems.

1. Marine Pollution
2. Availability of quality fishery on sustained basis and stability of price
3. Methods of Fishing
4. Preservation and storage of fishery products

According to exporters, there is scope to enhance fishery products trade provided the government assures quality and timely availability of fishery for value-addition. There is demand of Pakistani Fishery products such as white pamphlets, Lady Fish, Shrimps, Mussels and Crustaceans being tasty and of good quality. Presently, the European Commission has put a ban on import of fishery product from Pakistan which is causing meaningful economical loss for sea food exporters. If our fishery product assures provision of quality Fishery at competitive price, the value-added Fishery products can be exported in bigger volume as there is great demand for Pakistani products in the world market. Pakistan being moderate Fishery producing country has not been able to fetch a major share in the world market due to inconsistent government policy towards Fishery.

Project No.	S-ZMU/Med (238)
Project Title:	Association of Interleukin 6, adiponectin, leptin and blood lipid levels in Ischemic Stroke Patients.
Duration:	01-Year
Date of Initiation:	01.07.2008
Date of Completion:	30.06.2009
Final Report Received:	17.08.2009
Location of Scheme:	Ziauddin Medical University, Karachi
Principal Investigator:	Dr Anila Jaleel
Total Expenditure:	Rs. 232,720 /-

Main Objectives:

- To determine the plasma levels of adiponectin and interleukin 6 (IL 6) in normal subjects and ischemic stroke patients.
- To develop association of adiponectin and IL6 with ischemic changes in stroke patients.

Summary of work done:

Cerebrovascular disease is one of the leading cause of morbidity amongst elderly individuals. Adipocytokines like adiponectin and leptin have been reported to be associated with lipid metabolism, glucose metabolism and insulin resistance. Adiponectin causes inhibition of monocyte adhesion to endothelial cells, inhibition of oxidized low density lipoproteins (LDL), uptake of macrophage through scavenger receptors and inhibition of proliferation of migrated smooth muscle cells by the action of growth factors. Cytokines are also found to play important role in ischemic stroke but the results are conflicting. Interleukin 6 is a cytokine produced by many different cell types, including immune cells and adipose tissue that mediates inflammatory responses. IL6 has its major effects at sites distant from its origin and are consequent upon its circulating concentrations. IL6 is also called as endocrine cytokine. Recent studies have shown high serum levels of IL6 at the onset of stroke and related to neurological worsening. Several studies have been carried out to show the role of circulating adiponectin in atherosclerosis but no studies of the association of adiponectin and Interleukin

6 with ischemic cerebrovascular disease has been carried out in our population. As cerebrovascular disease is major cause of morbidity in our population, there was needed to look into the factors that may play important role in it. This study was planned to determine the plasma levels of leptin, adiponectin and interleukin 6 in ischemic strike patients and to develop association between them. The study included 80 subjects in the age between 46 to 70 years from neurological clinics or already admitted patient (within 48 hours).

These were divided into two groups of forty each. First group served as control and second as experimental. 10ml of blood was drawn and 3 ml was collected in tubes containing EDTA for estimation of CBC and rest 7 ml of serum was stored at -20 °C for estimation of fasting and random blood glucose and lipid profile. Leptin, adiponectin and interleukin 6 (IL 6) were done on ELISA by commercial kits obtained from DRG (Germany).

Results showed that the mean plasma level of adiponectin of the forty patients with ischemic CVD was significantly lower than that of forty subjects without CVD ($4.36 \pm 0.21 \mu\text{g/ml}$ versus $6.97 \pm 0.241 \mu\text{g/ml}$; $P < 0.001$). Decreasing concentrations of adiponectin were negatively correlated with infraction size in ischemic CVD patients.

The mean plasma level of Leptin and Interlukin 6 (IL 6) were significantly higher in patients with ischemic CVD than that of subjects without CVD.

Leptin and interluukin 6 may have proinflammatory and adiponectin as antiinflammtory role in ischemic stroke.

Project No.	P-PU/Phys (131)
Project Title:	Nonlinear electromagnetic wave propagation in plasma like media
Duration:	03-Years
Date of Initiation:	27.07.2006

Date of Completion: 26.07.2009
Final Report Received: 01.03.2010
Location of Scheme: University of Punjab, Lahore
Principal Investigator: Dr. Arshad Ali
Total Expenditure: Rs. 372,592/-

Main Objectives: To investigate nonlinear wave propagation from a theoretical point of view. The areas of interest (i.e. semiconductor, composite medium and optical fiber etc.) are ones where a classical or semi classical approach is possible.

Summary of work done:

The wave propagation in plasma like media was analytically investigated and three different types of composite layered media through which the waves propagate was considered.

First problem was related to the nonlinear magnetostatic surface waves in a composite structure consisting of a ferrite film of Yttrium Iron Garnet (YIG) adjacent to a isotropic nonlinear dielectric cover having Kerr-like effect and a substrate of Left-handed material (which is created by an array of long metallic wires, yielding a *plasma* like effective dielectric constant, interspersed with an array of split ring resonators). The behavior presented in these results might be used in the construction and design of microwave devices, such as switches, filters, isolaters etc. After completing this phase a problem related to the study of the dispersion of magnetostatic surface waves propagation in a composite (layered) waveguide structure of a linear dielectric, ferrite film and a conductor was studied. The dependence of effective wave index on the propagation frequency for the cases of poor and infinite conductivities was investigated. It was found that for poor conductors, our dispersion relation reduces to the well known expression of Damon-Eshbach surface wave mode for tangentially magnetized ferrite film, and in the other case (for infinite conductivity) and the different results on the dispersion characteristics were observed. This has been published in journal of Natural Sciences & Mathematics.

The third problem which consists of two cases, is related to the wave propagation in a (a) good conducting and in a (b) high-temperature superconducting parallel plate waveguides, filled with nonlinear left-handed material (LHM). In the first case, we consider a nonlinear left-handed material between two parallel conducting plates- In this case the non linear response of left-handed material is characterized by dielectric permittivity which depends upon the intensity of electric field (Kerr-type nonlinearity), that is, we study the nonlinear propagation properties for nonlinear LHM filled wavelength structure between parallel conducting plates. We found that the electromagnetic field distributions in the non-linear LHM filled parallel-plate waveguide structure. In the second case, we studied the wave propagation in high-temperature superconducting parallel plate waveguide filled with nonlinear left-handed material (LHM). Here the Meissner effect is used in boundary conditions to discuss the wave propagation due to the presence of high temperature superconducting parallel-plates. It is found that wave propagation properties of these HTS parallel plate waveguide filled with nonlinear LHM are also different from some earlier theoretical results. This work has been submitted for publication in a foreign journal of international repute.

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, 17 research papers were published in different national & international journals. Details are at 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.Sc. (Hons) degrees:

S. No.	Project No.	Name of Researcher	Degree awarded
1.	P-AU/Agr (316)	i. Mr. M. Makky Javaid	Ph. D
		ii. Mr. Muhammad Kamran	Ph. D
		iii. Mr. M. Makky Javaid	M.Sc. (Hons.)
		iv. Syed Kamil Hussnain	M.Sc. (Hons.)
		v. Miss Samia Naleem	M.Sc. (Hons.)
		vi. Miss Beenish Aslam	M.Sc. (Hons.)
		vii. Mr. Abdul Manan	M.Sc. (Hons.)
		viii. Miss Aysha Khalid	M.Sc. (Hons.)
		ix. Miss Asma	M.Sc. (Hons.)

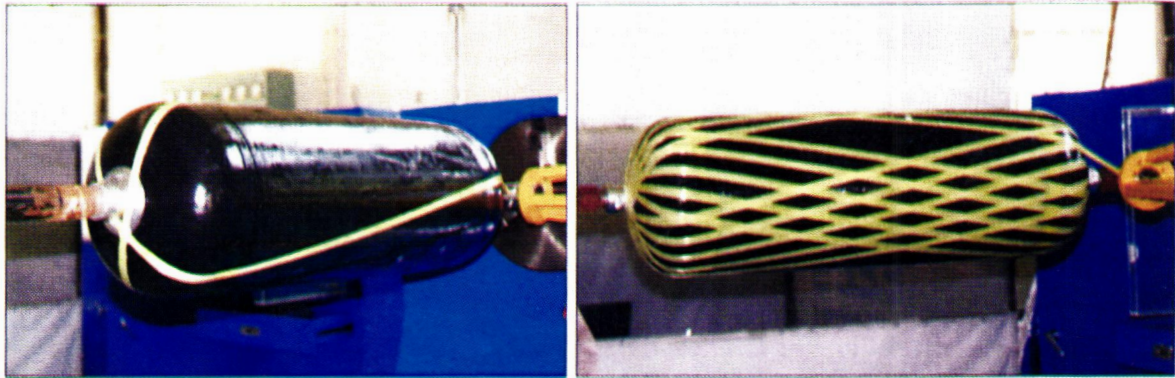
2.	P-AU/Agr (318)	i. Miss Asma Saleem	Ph. D
		ii. Mr. Tahir Mehmood	M.Phil
		iii. Mr. Muhammad Kamran	M.Phil
		iv. Mr. Muhammad Muslim Shahnaz	M.Phil
		v. Miss Aqdas Naz	M.Phil
3.	S-PCSIR/Chem. (292)	Miss Hina A Siddiqui	Ph. D
4.	C-PU/Phys(131)	Miss Burhan Zamir	M.Phil

1.1.4 R & D Industry Programme:

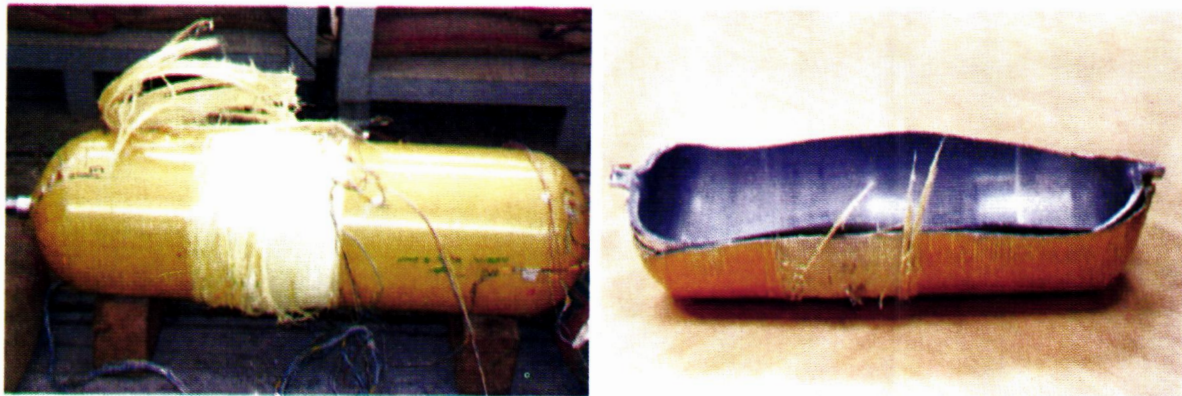
Focusing on collaborative research and strong industrial linkages, R&D–Industry Programme (previously called Industrial Linkages Programme) is bringing together researchers, end-users and the funding institutions at one platform to create an environment of a unified approach to

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

During the year, a project of applied nature entitled, “Indigenous Development of Formulation of Radiation Compatible Polypropylene for Industrial Manufacture of Medical Disposable Syringes” was initiated in May, 2010 and an amount of Rs. 1,447,000/- was released to School of Chemical and Materials Engineering (SCME), National University of Sciences & Technology (NUST), Islamabad on account of first installment of the project funds. This project is aimed at developing indigenous technology for the manufacturing of radiation compatible polypropylene syringes to reduce our dependence on developed countries in terms of technology development. Moreover, research and technical work on project entitled “Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders” was completed. It is worth mentioning that Pakistan Space and Upper Atmosphere Research Commission (SUPARCO) contributed considerably in terms of human and financial resources and spent about Rs. 7 million in R&D activity in addition to Rs. 1.8 Million provided by PSF. The certification of these indigenously developed CNG Cylinders is required before their manufacturing on industrial scale ultimately leading to the commercialization of this technology.



Fabrication of CNG cylinder under PSF funded project “*Design and Manufacturing of Light Weight Composite Reinforced CNG Cylinders*”



A: CNG cylinder after burst test, B: the sectioned view of CNG cylinder after burst test

Under this programme, MoU was signed between PSF and Sukkur Chamber of Commerce and Industry (SCCI) in November, 2009 for mutual collaboration and identification of different issues faced by the local industry. One very important issue i.e., “Development of Dates Dehydration Technology for Date Producing Areas of Sukkur and Khairpur” was discussed in detail with input of local industrial representatives. Efforts are being made to find out indigenous solutions for this important issue. Efforts are being made to create awareness about the importance of technology development and commercialization for socio-economic development of the country



Dr. Manzoor Hussain Soomro, Chairman, PSF signing MoU with Sukkur Chamber of Commerce and Industry (SCCI) on November 11, 2009

1.1.5 NATURAL SCIENCES LINKAGES PROGRAMME (NSLP) ENDOWMENT FUND

In view of expanding trade of agricultural commodities between the two countries, the Commodity Credit Corporation of United States of America and Ministry of Finance, Government of Pakistan signed an Agreement for Establishment of Natural Sciences Linkages Programme (NLSP) under PL-480 scheme. Hence, the MoU between US Department of Agriculture, Foreign Agricultural Service and the Ministry of Science & Technology (MoST), Government of Pakistan was signed to create the Endowment Fund for US\$ 10 million (in local currency) in PSF under the umbrella of MoST. The NSLP is governed by a Board of Governors, headed by the Minister for S&T, with members including Secretaries of MoST, Ministry of Finance (MoF), Economics Affairs Division (EAD), Ministry of Food, Agriculture & Livestock (MINFAL), Chairman PSF, Chairman, PARC and Director, NIAB.

The primary goals of this programme are:

- To increase the contact and collaboration among natural scientists and institutions of biological research, development and higher learning between the two nations.
- To provide researchers and institutions with opportunities to exchange information, ideas, skills and techniques.
- To enhance opportunities of collaboration in solving problems of common interest relating to natural sciences and
- To utilize special research and development facilities or opportunities available among the two countries.

a. Under process Projects:

During the report period, 32 proposals remained under active consideration of the Foundation. Out of which, 06 were recommended by the NSLP Technical Committee for funding by the Foundation at a total cost of Rs.27.403million (Annexure-II).

b. On-going Projects:

During the year, 12 projects were remained on-going and 16 progress reports of these projects (semi annual and annual) were received. The PSF staff scrutinized the semi annual reports, whereas the annual reports, after initial scrutiny were sent to subject experts to assess the interim progress of the project. It may be mentioned that that due installments of the on-going projects are released only if the interim progress of the projects at the end of each project year is satisfactory. An amount of Rs. 2.55 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-III.

1.1 SCIENCE PROMOTION

1.2.1 Activities Funded from Non Development Budget

a. Institutional Support Programme.

A total of 07 requests were received during the year. Of these, 04 were approved and an amount of Rs. 437,000/- was released to 02 requests of Pakistan Museum of Natural History, Islamabad for the purchase of equipments and to strengthen the museum.

Name of Institution	Title of Activity/Request	Amount Released (Rs.)
Pakistan Museum of Natural History (PMNH), Islamabad	Purchase of Cutting/Polishing Equipment and Installation	187,000/-
	Financial Assistance to meet the expenses on Preservation, Curation and Storage of the Scientific material obtained from Zoological Survey Department, Natural History Museum, Karachi.	250,000/-
	Total	437,000/-

b. PSF Fellowship Programme.

A number of M. Phil and Ph. D students applied for the PSF Fellowships to carry out their research at parent institutions. However, an amount of Rs. 0.198 million was paid to 3 Ph.D/M.Phil students on account of research fellowships for carrying out their research work at their parent institutions. The Foundation has also instituted a prestigious award of “Z.A. Hashmi Gold Medal” in the honour of its Founding Chairman. The medal is awarded to the best researcher selected on the basis of results achieved under PSF Supported research projects. The cash of Rs.100,000/- is also awarded alongwith medal. During report period, 2 medals were prepared for 2 winners.

c. Financial Assistance for holding of Conferences, Seminars, Symposia and Workshops:

The Foundation provides partial financial assistance to scientific organizations for holding of scientific conferences, seminars, symposia and workshops. During the report period, an amount of Rs. 1,090,000/- was released to scientific organizations for holding of the 21 conferences, which are listed below.

Sr. #	Title of Conference	Name of Organizers	Amount Released (Rs.)
1.	1st International Conference on Energy, Environment Sustainable Development for growing Economies (EESD 2009), from 4 - 6 May, 2009, at Mehran UET, Auditorium.	Dr. Khan Muhammad Barohi Director Institute of Environmental Engineering Management, Mehran University of Engineering and Technology, Jamshoro, Sindh.	50,000/-

2.	International Symposium on Compatible with Climate Change (ISCCC) from 27-29 March, 2009, at Shah Abdul Latif University, Khairpur.	Prof. Dr. G. Raza Bhatti Director, Herbarium Shah Abdul Latif University Botanical Garden, Khairpur.	50,000/-
3.	1st International Conference on Aerospace Science Engineering (ICASE), from 18-20 August 2009, at IST Campus	Dr. Maqbool Ahmad Dean Institute of Space Technology (IST), Islamabad	50,000/-
4.	Teacher Training Workshop Lab Methods in Genetics, July/August 2009, at Department of Animal Sciences, QAU, Islamabad	Dr. Sajid Malik Assistant Professor Department of Animal Sciences, Quaid-i-Azam University, Islamabad.	30,000/-
5.	Conference on Livestock Genomic, from 16-17 June 2009, at Conference room, UVAS, Lahore.	Prof. Dr. Masroor Ellahi Babar Chairman Department of Molecular Biology and Biotechnology University of Veterinary and Animal Sciences, Lahore.	50,000/-
6.	13th IEEE International Multitopic Conference 2009 (INMIC 2009), from 14-15 December 2009, at MAJU, Islamabad	Prof. Dr. Muhammad Mansoor Ahmad Executive Vice President, MAJU, Islamabad	50,000/-
7.	Managing Research Projects-The Effective Ways, from 19-20 August 2009, at UVAS, Lahore.	Dr. Naseem Ahmad Director, Directorate of Research University of Veterinary and Animal Sciences, Lahore	50,000/-
8.	5th International Symposium on Biotechnology, from 4-7th October 2009, at University of Sindh, Jamshoro	Prof. Dr. Umar Dohat Institute of Biotechnology and Genetic Engineering University of Sindh, Jamshoro	50,000/-
9.	Demonstration of Modern Technologies in Agriculture, from 21 -23 October 2009 at	Prof. Dr. Muhammad Ashfaq Dean Faculty of Agriculture	50,000/-

	AU, Faisalabad	University of Agriculture Faisalabad	
10.	Modern Technique for the Analysis of Ecological Data, from 2-30 September 2009, at PMNH, Islamabad	Dr. Muhammad Rafique Director Zoological Science Division Pakistan Museum of Natural History, Islamabad	50,000/-
11.	8th International and 20th National Chemistry Conference on Revitalization of Chemical Research in Pakistan, from 15 -17 February 2010 at QAU Islamabad	Dr. Saqib Ali Chairman Department of Chemistry Quaid-i-Azam University Islamabad	50,000/-
12.	International Conference on Recent Advances in Human Nutrition with Special Reference to Vulnerable Groups from 14-17 December, 2009 at AU, Faisalabad	Prof. Dr. Faqir Muhammad Anjum D.G. National Institute of Food Science Technology University of Agriculture Faisalabad	50,000/-
13.	Five days conference on 22nd Asian Pacific Weed Science Conference on March 8-12, 2010 at G.C. University Lahore	Prof. Dr. Khan Bahadar Marwat President Asia Pacific Weed Science Society Department of Weed Science NWFP Agricultural University Peshawar	50,000/-
14.	Water Crisis in Pakistan on March 19-20, 2010 Inauguration at local hotel and Technical Session at NCBA E Lahore	Prof. Dr. Khurshed Ahmed Department of Environmental Management National College of Business Administration and Economics, Lahore.	50,000/-
15.	Ground Water Sampling Survey in the Thar Desert Area of Sindh Province	Dr. Tahir Rafique Senior Scientific Officer PCSIR Labs, Complex, Karachi.	100,000/-
16.	Water Resources of the Punjab: Challenges and	Dr. Abdul Rauf Nizami General Secretary	50,000/-

	Respos on April 3, 2010 at Institute of Education & Research Department (IER), University of the Punjab Lahore	Institute of Geology University of the Punjab Lahore	
17.	Integrating Disaster Management and Climate Change Adaptation in Policy Making from 15 -17 October, 2009 at Bara Gali Campus, University of Peshawar	Prof. Dr. Amir Nawaz Khan Centre for Disaster Preparedness and Management University of Peshawar, Peshawar	50,000/-
18.	2nd International Conference on Biomedical Materials: (Prospects & Potentials) 2009 at CIIT, Lahore	Dr. Ihtesham-ur-Rehman Director Interdisciplinary Research Centre in Biomedical Materials, CIIT, Lahore	50,000/-
19.	3rd Training workshop on ore Microscopy for year 2009-10 at Geological Survey of Pakistan, Islamabad	Dr. Rehanul Siddiqui Deputy Director Geoscience Advance Research Labs Geological Survey of Pakistan, Islamabad	60,000/-
20.	All Pakistan Mathematical Conference 2010” from 20-23 June, 2010 at NCP, QAU, Islamabad	Prof. Dr. Saleem Asghar President All Pakistan Mathematical Association (APMA) National Centre for Physics (NCP), QAU, Islamabad	50,000/-
21.	Current Trends in Cellular, Medical and Environment Physiology” from 17-19 May, 2010 at QAU, Islamabad	Dr. Irfan Zia Qureshi Assistant Professor Department of Animal Sciences Quaid-i-Azam University Islamabad	50,000/-
Total			1,090,000/

d. Support to Scientific Societies/Journals

The promotion of Scientific Societies/Associations, Learned Bodies 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, is an important activity of the Foundation in addition to financial assistance for publication of Scientific Journals. The Foundation awards annual grants to the established Learned Bodies and Scientific Societies, as partial financial assistance for the achievement of their approved objectives and publication of their respective Scientific Journals. During the report period, **Rs.2,160,000/-**were granted to fifteen (15)Scientific Societies for their activities whereas Rs.200,000/- were released in favour of editors of four (04) Journals for publication.

Sr. No.	Name of Society	Amount of Grant (Rs.)
1.	The Zoological Society of Pakistan	200,000/-
2.	Pakistan Thalassaemia Welfare Society	100,000/-
3.	Pakistan Mathematical Society	150,000/-
4.	Pakistan Phytopathological Society	100,000/-
5.	Pakistan Society of Nematologists	400,000/-
6.	Horticultural Foundation of Pakistan	100,000/-
7.	The Chemical Society of Pakistan	200,000/-
8.	Agriculture Foundation of Pakistan	150,000/-
9.	Islamic Society of Statistical Sciences	50,000/-
10.	Pakistan Association for the Advancement of Science	100,000/-
11.	Soil Science Society of Pakistan	50,000/-
12.	Weed Science Society of Pakistan	160,000/-
13.	Pakistan Materials Society	200,000/-
14.	Society of Economic Geologists and Mineral Technologists	50,000/-
15.	Pharmacological Society of Pakistan	150,000/-
	Total	2,160,000/-

Sr. No.	Name of the Journal	Amount of Grant (Rs.)
1.	Farming Out Look	50,000/-
2.	Pakistan Journal of Pharmaceutical Sciences	50,000/-
3.	Pakistan Journal of Science	50,000/-
4.	Pakistan Oral & Dental Journal	50,000/-
Total		200,000/-

e. Inventions and Innovations.

Under this programme, four teams of engineering students from GIK, UET, Lahore and NUST Islamabad were co-sponsored for designing and fabrication of their model cars for participation in the International Competition, "Shell Eco-Marathon Asia, 2010" held in July, 2010 in Malaysia and an amount of Rs.1.00 million was released. These kinds of competitions explore the potential of future technologies in terms of appropriate designing and efficient fuel consumption.



Chairman Dr. Manzoor H. Soomro along with the participating team of GIK for Shell Eco-Marathon Asia, 2010

f. Scientific Survey.

The Foundation also funds for the scientific surveys to collect data on important scientific issues/problems. During the year an amount of Rs.0.1 million was released to PCSIR, Karachi for a scientific survey entitled “*Ground -water Sampling Survey in the Thar Desert Areas of Sindh Province.*”

1.2.2 Planning & Development Activities:

A. Development Activities

i) 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 report year, there was an allocation of Rs. 10.0 million under PSDP 2009-10. Later on PSDP allocation was reduced and an amount of Rs. 2.5 million was released which was utilized for payment of travel grants to the scientists/technologists (sanctioned during 2008-09), staff salaries and other miscellaneous expenses.

For the year under report, the project activity remained suspended. However, twenty five (25) travel grant requests, received during 2009-10 were regretted due to paucity of funds.

ii) On-going Development Project: “Automation of PSF Research Support Programme and Other Activities”

During the report year, following targets were achieved;

- a) System and database analysis for software development for research support, travel grant etc and science popularization programmes were done.
- b) Application software for research support programmed and other activities of the Foundation was prepared and uploaded on the servers and is operational

- c) Database and software for completed research projects were developed.
- d) Software Development for on-going research projects along with Report Generation System was completed.
- e) An electric generator was installed and earthing for generator and server room was completed.

All objectives of the project were achieved and the project was successfully completed. The PC-IV of the project is being prepared.

iii) **Development of Science Awareness Programmes for Balochistan:**

In line with the present Government's development plan "Aghaz-e-Haqooq-e-Balochistan Package" and "Khulo Development Package", PSF has planned to prepare development projects for awareness of scientific & technological advancement among students and general public of Balochistan. Accordingly, the concept papers of following projects have been submitted to Government of Balochistan for concurrence/consideration:

- Establishment of Two Science Centres in Balochistan
- Establishment of Science Clubs in 50 High Schools of Balochistan

One Science Centre shall be established at the Lasbella University of Agriculture, Water and Marine Sciences (LUAWMS), Uthal while the other at Balochistan University of Information Technology, Engineering & Management Sciences (BUIITEMS), Quetta. After receiving the concurrence of the Balochistan Government, the PC-Is shall be submitted to the Ministry of Science & Technology for approval.

The Lasbella University of Agriculture, Water and Marine Sciences (LUAWMS) have agreed to provide a piece of land (2 acres) for construction of Science Centre at its premises while, the BUIITEMS has already provided the land for the establishment of Science Centre in Quetta.

B. **Non-Development Activities**

i. **International Liaison**

During the report period, thirty (30) S&T proposals of PSF/PMNH/PASTIC were forwarded to MoST for consideration/approval under various S&T protocols signed by the Government of Pakistan with various countries.

▪ **Revival of Activities under MoU signed between PSF and NSFC China:**

A proposal entitled “Study Visit / Exchange of Scientists between Pakistan Science Foundation and National Natural Science Foundation of China (NSFC) and related S&T Organizations of China” sent to NSFC to explore the possibilities of short & long term collaborative programmes with NSFC under the MoU.

▪ **ECO Science Foundation:**

The Foundation will be the 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. It will be established in Pakistan.

ii. PSF Stall at Disaster Management Exhibition, 2010

PSF participated / organized a stall in the Disaster Management Exhibition, 2010 (DME-2010) at Peshawar, jointly organized by the Centre for Disaster Preparedness and Management, University of Peshawar and Provincial Disaster Management Authority, Khyber Pakhtoonkhwa.

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

A “National Achievement Segment” is being established at National Monument Museum, Islamabad by the Lok Virsa, Ministry of Culture & Tourism. One part of this segment will display the achievement of S&T Sector in Pakistan since 1947 to 2010. Pakistan Science Foundation has been nominated as focal organization to coordinate with S&T Organizations for provision of relevant material to Lok Virsa on behalf of MoST. In this regard letters have been sent to all S&T Organizations for provision of the following material required by Lok Virsa Secretariat.

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

The receipt of material is in progress.

iv. Other Activities:

Coordination/submission of reports and other documents regarding PSDP projects of PSF, PMNH and PASTIC to MoST.

1.3 SCIENCE POPULARIZATION

The need of promotion and popularization of science and technology for the economic growth and for improving the quality of life for 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 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. Non-formal science education activities 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, the Government assigned the task of popularization of science 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 these 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 evaluation of science and technology goods, which include critical thought, ideas and values, the history and sociology of scientific knowledge, how science is practiced, derivation of results of scientific research and technological development. It aims to involve individuals in the excitement of science, in order to increase the public understanding about science through the use of interactive exhibits and every day examples. Public should be able to see the link between science and technology and our everyday living that has penetrated into every aspect of our lives.

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

- Science Caravan(Mobile Science Exhibition)
- Establishment of Science Centres, Museums, Herbaria & Planetaria.
- Strengthening of the Laboratories of the Govt. High Schools of rural areas
- Organization of S&T Fairs and Traveling Expos.
- Preparation and Distribution of Science posters for School.
- 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 and Brochures
- Financial Assistance for publication of Scientific Books
- Financial Assistance for science popularization activities of other organizations.

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, science and technology has taken on in all arenas of social life; the popularization of science is increasingly becoming a very significant strategic issue.

a. Science Caravans (Mobile Science Exhibition):

Science Caravans are meant for organizing Mobile Science Exhibitions for 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 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 sustainability 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 emphasizes upon stimulating and motivating the students towards scientific and technological studies for playing their appropriate role in our social development.

Science Caravan is a Mobile Science Exhibition that has been designed to increase public awareness about science and to motivate the younger generation of the country towards study of science. Through Mobile Science Exhibition, the students and general public of rural/backward areas of the country are exposed to some of the most fascinating scientific and technical developments of modern world. All narrations are bilingual (Urdu and English) 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, 9 Science Caravan Units are in operation. Eight Units are stationed in 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 37 centers for 439 days in various schools countrywide. More than 108,502 Students of 539 Schools visited these exhibitions. Summary of exhibitions is given below:

Summary of Exhibitions by PSF Science Caravans (2009-10)

Caravan Unit	Days	Schools	Students/Visitors
Federal Unit	65	166	30,500
Punjab Unit	62	83	25,100
Sindh Unit	143	128	28,950
KPK Unit	109	122	13,272
Balochistan Unit	31	40	10,680
Total	439	539	108,502

Detail of the Exhibitions carried out by all Caravan units is placed at Annexure-V.

b. 19th 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 nineteen Essay & Poster contests in which thousands of students have participated from all over the country.

In the first phase, the Boards of Intermediate & Secondary Education arrange Science Essay and Poster Competitions within their jurisdiction on the theme allocated by the Foundation and submit the results of the Intra Board level to the Foundation. After receipt of the results from all Boards, PSF organizes “Inter Board Contest” (the final) at PSF Head Office, Islamabad each year. 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 merit certificates and cash prizes to the winner students. The amount of prize money for the best three students of Intra Board level is Rs.5,000/-, Rs.3,000/- & Rs.2,000/- and that for Inter Board level is Rs.10,000/-, Rs.6,000/- and Rs.4,000/- respectively.

19th Science Essay Competition was organized during 2009-10, the theme of the year was “Islam & Science”. The essay competition was organized in three languages (English, Urdu & Sindhi). Hundreds of students participated in the competition from all Boards. Out of them, sixty-two students were selected as winners. Detailed list of the winner students of Intra Board Science Essay Contest is placed at Annexure-VI. Cash prizes were awarded to the winner students. Final contest (Inter Board) was organized by PSF at Islamabad. Following panel of judges evaluated the essays for the best three positions:

- Mr. Muhammad Hamid, Principal, IMCB, F-10/3, Islamabad
- Dr. Muhammad Javed Iqbal, Chairman, Dept. of Distance, Non-formal & Continuing Education, AIOU, Islamabad
- Mr. Maqsood Ahmed Sheikh, Senior Scientific Officer, PSF (for Sindhi Essays)

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

Urdu Language

1	Anam Akbar	Govt. Comprehensive Girls High School Sargodha	First
2	Muhammad Tayyab	Iqra School & College Hoti, Mardan	Second
3	Aamir Mujtaba	Govt. Comprehensive Model High School, Jhang	Third

English Language

1	Sadia Sehar	Army Public School, Thatta	First
2	Mahroona Ali Syed	Khyber PS & College, Mansehra	Second
3	Maria Manzoor	Laurel Bank Public School, G.T. Road, Lahore	Third

Sindhi Language

1	Atia Khalid	Happy Home High School, Kotri	First
2	Nauroz Ali Brohi	Noor-ul-Islam High School, Tando Muhammad Khan	Second
3	Irfan Kareem	Customs Public School, 29-C, Block 6, P.E.C.H.S, Shahrah-e-Faisal, Karachi	Third

In total, an amount of Rs.283,000/- was paid to the winner students of Essay Competition.

19th Science Poster Competition was held on the theme “Fuel Resources in the 21st Century”. Forty-eight students were declared as winners of Intra Board Competition. Detailed list of the winner students of Intra Board Science Poster Contest is placed at Annexure-VII. Cash prizes were awarded to the winner students. Final contest (Inter Board) was organized by PSF at Pakistan National Council of the Arts (PNCA), Islamabad. Director General, PNCA was the Chief Guest. A panel of judges consisting of the following evaluated the posters for the best three positions.

- Ms. Farhat Rajpar, Principal Scientific Officer, PSF
- Ms. Mehmooda Ghazia, Director, CAW, PNCA, Islamabad
- Syed Nusrat H. Zaidi, Sr. Graphic Artist, PSF

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

1	Rabbiya Rizwan Karim	Falcon House Grammar School Campus -5, E-6, Block-F, North Nazimabad, Karachi	First
2	Waqas Sultan	Army Public School, Sargodha	Second
3	Arooj Bhatti	Hamdard Public School, Madinatul Hikmat, Muhammad Bin Qasim Avenue, Karachi	Third
4	Nabeel Rahat	Divisional Public School, Sargodha	Third

In total an amount of Rs.199,000/- was paid to the winner students as prize money.

c. Science Model Competitions

d. Donation of Scientific Literature to High Schools:

As its regular programme, the Foundation donates popular science magazine “Monthly Global Science” (published by Global Science Multi-publications, Karachi) to 1000 high schools since last more than ten years. During the year, 18,000 copies of Popular Science magazine “Monthly Global Science” were acquired and donated to 1000 schools of the country. In addition, 13,000 copies of scientific brochures were also distributed among the students. Seventy five (75) copies of the Scientific Journal “The Fountain” published by “Light Publishing, Turkey” were acquired and provided to the Caravan offices, PASTIC office and PMNH. An amount of Rs.30,000/- was sanctioned to GIKI Science Society, Ghulam Ishaq Khan Institute of Engineering Sciences & Technology, Topi for publication of Magazine “Aurora”.

e. Financial Assistance to High Schools and Other Organizations:

In addition to Science Popularization activities, the Foundation provides financial assistance to high schools/other institutions for their science propagation activities. It also helps the schools in strengthening of their Laboratories. In this respect, a number of grants were provided to various schools and other institutions. PSF also helps S&T organizations in organizing such activities. During the report period, an amount of Rs.910,000/- was

sanctioned to nineteen (19) schools. Detailed list of the schools to which financial assistance was provided is placed at Annexure-VIII.

An amount of Rs. 60,000/- was also released to National Museum of Science & Technology, Lahore for 22nd Annual Science Competition, 2009, and Rs.50,000/- to Adventure Foundation, Islamabad for 8th National Children Mountain Conservation Meet-2009. Moreover, an amount of Rs.100,000/- was released to College of Electrical & Mechanical Engineering, National University of Sciences & Technology (NUST), Rawalpindi for 9th All Pakistan Inter College/University Software Exhibition & Competition.

f. International Traveling Expo on Environment “The Earths’ Future in Our Hands” :

Organizing S&T Fairs and Expos is one of the important science popularization programs of the Foundation. Recently, two mega Expos namely; S&T Expo 2007 “Shaping the Future” [March-April 2007, Islamabad] and International Math Expo “Experiencing Mathematics” [April-May 2008, Islamabad, Lahore & Peshawar] were very successfully organized at National level for increasing science awareness in the society.

During 2009-10, PSF in collaboration with French Embassy in Pakistan organized International Traveling Expo on Environment “The Earth’s Future in our Hands” at Islamabad, Abbottabd, Sukkur and Multan w.e.f. October 02 to December 16, 2009. The Expo was prepared by UNESCO and its partners and was provided to PSF free of cost by the French counterparts for three months i.e. Oct-Dec, 2009. One of the major components of the Expo was 03 days “Training Workshop” for Master Trainers held at Islamabad Model College for Girls, F-7/4, Islamabad w.e.f. September 29 to October 1, 2009. Mr. Pierre Beauvallet, (Creator of the Expo) from Scientific Technical Industrial and Cultural Centre (CCSTI) France conducted the Workshop and provided training to more than 50 Master Trainers from PSF, PMNH, PASTIC, FDE Islamabad, BZU Multan, SALU Khairpur, etc.

The Inaugural Ceremony of the Expo was held on 2nd October, 2009 at IMCG, F-7/4, Islamabad. H.E. Mr. Daniel Jouanneau, Ambassador of France to Pakistan, was the Chief Guest and Senator Muhammad Azam Khan Swati, Federal Minister for Science & Technology presided over the Inaugural function. Mr. Muhammad Kashif Murtaza, Federal

Secretary, Ministry of Science and Technology and a number of other senior officers were also present. Addressing the participants, Mr. Daniel Jouanneau said that awareness of environmental issues is essential to protect environment. He also highlighted the French government's achievements towards environment protection including measures to build environment-friendly buildings in France. Mr. Azam Khan Swati said that environmental degradation is the problem being faced by the countries all over the world. "Either we have to address this particular problem or face natural calamities like drought and desertification etc," he added. He asked teachers, scientists and media persons to play their role in creating awareness of environmental problems and their solutions among students and general public. Mr. Muhammad Kashif Murtaza said that availability of per capita water is decreasing in the world as fresh water sources are being severely polluted. He said that quality potable water is also deteriorating, resulting decline in fisheries. He also highlighted different biodiversity problems. More than 6,000 students, teachers and general public visited the Expo at Islamabad.

The Expo was aimed to signify the importance of environment and inculcate the extent to which we can transform our environment by learning its various fascinating phenomena, and to raise student's awareness about the urgency to act if we are to save our earth for our future generations. It also offered solutions to problems as proposed by the scientists. The exhibition was structured around three major themes including living with our Environment, Tomorrow's Consumption and Production and Responsible Sharing of Resources.

Subsequently, the Expo was taken to Abbottabad, but unfortunately, due to unavoidable circumstances, it could not be opened there. Afterwards, the Expo was organized at Sukkur and was inaugurated by Mr. Pierre SEILLANT, Consul General of France in Karachi and Prof. Dr. Nilofer Shaikh, Vice Chancellor, Shah Abdul Latif University, Khairpur. Addressing the participants, the chief guest Mr. Pierre SEILLANT said that awareness of environmental issues is crucial to protect environment. He said that environment protection is top priority of French government and collaboration in organizing an exhibition on environment is French government's contribution to celebration of 2009 as Year of Environment by Pakistan.

Dr. Nilofar Shaikh said that time has come to realize each person about his duty relating to environment because future of the earth and coming generations is in our hands. She asked teachers, scientists and media persons to play their role in creating awareness of environmental problems and their solutions among students and general public. Dr. Manzoor H. Soomro, Chairman, PSF addressed the gathering and highlighted PSF programs for promotion and popularization of science. He said that the year 2009 was declared as the "National Year of Environment" by the Government of Pakistan and realizing its responsibility to contribute in environmental protection, PSF planned this programme timely to create awareness about the environmental issues and ways to protect the environment. He said that PSF is striving to create science awareness among the students including environmental problems and their solutions. He told that such Exhibitions being the interactive way of learning, are more effective than delivering lectures in class rooms, and this exhibition is aimed at highlighting the environmental threats to our earth and how to avoid them. He hoped that the Expo will highlight the importance of various aspects of environment as well as will demonstrate the extent to which we can protect it by understanding its various phenomena. At the end, Ms. Farhat Rajpar, thanked the honorable guests and participants. About 8,000 students, teachers and general public visited the Expo at Sukkur.

The historical city of saints and civilization Multan was chosen as last destination of the Expo. The Expo was inaugurated on 2nd December by Honourable Dr. Muhammad Zafarullah, Vice Chancellor, Bahauddin Zakria University, Multan. Dr. Syed Shahid Hussain, Member Science, Pakistan Science Foundation was the guest of honour at the inaugural ceremony. The closing of the Expo was held at Bahauddin Zakria University, Multan and H.E. Mr. Daniel Jouanneau, Ambassador of France to Pakistan was the chief guest at this occasion. Dr. Manzoor H. Soomro, Chairman, PSF was the guest of honour. Dr. Muhammad Zafarullh, welcomed the guests and thanked PSF for organizing the Expo on Environment at Multan. Dr. Manzoor H. Soomro appreciated the efforts of all stakeholders for making the Expo a successful event. He thanked the French Ambassador and Ms. Sandie Favier, (Scientific Attachee to Pakistan) for their continuous support. Dr. Soomro said that by virtue of the exhibits of the Expo, the researchers can imagine the way of working for science awareness of international bodies like Scientific, Technical, Industrial and Cultural Centre (CCSTI), France and by addressing the environmental threats exposed through the Expo we can work for

protection of the Future on our Earth because of course “The Future is in Our Hands”. He requested the researchers to come ahead and work with PSF for promotion and popularization of science in the country for its socio-economic development. Around 9,000 students, faculty members and general public visited the Expo.

In total, the Expo caught attention of around 23,000 visitors. Electronic and print media gave wide coverage to the Expo activities. ARY and Express News gave detailed reports and live coverage of the Expo.

g. Interaction of Students/Faculty members with the Ambassador of France:

PSF arranged a program entitled “Interaction of Students and Faculty Members with H.E. Daniel Jouanneau, Ambassador of France to Pakistan” on 16 December 2009 at the Jinnah Auditorium, Bahauddin Zakria University, Multan. Dr. Manzoor H. Soomro, Chairman, PSF accompanied the Ambassador in the session. About 900 students and 100 faculty members participated in this two hours session. Mr. Daniel Jouanneau introduced a number of programs of Govt. of France for uplifting of the education in Pakistan. He said that the French Govt. is providing a number of scholarships in various disciplines to Pakistani students for research and higher studies in France. He offered the services of Embassy of France in Pakistan to the faculty members and students for their educational and research related activities. Dr. Muhammad Zafarullah, Vice Chancellor, Bahauddin Zakria University, Multan thanked Pakistan Science Foundation and French Embassy for organizing the program. At the end, he presented souvenirs to H.E. Daniel Jouanneau and Dr. Manzoor H. Soomro.

h. World Science Day for Peace and Development:

PSF arranges a number of programs for commemoration of the World Science Day for Peace and Development (WSDPD). November 10 of each year as WSDPD was proclaimed by UNESCO during the General Conference in 2001. The purpose of the WSDPD is to renew the national as well as international commitments to science for peace and development and to stress the use of science for the benefit of the society. In this connection, PSF Science Centre, Faisalabad organized science exhibition and speech competition on “Science for Peace and Development” w.e.f. 10-14 Nov., 2009 at Science Centre, Faisalabad. Dr. G.A. Raza Bhatti

and Syed Mohsin Raza delivered their talks on the “Use of Science for Better Environment” and addressed environmental issues on November, 10 at Govt. High School, Sukkur.

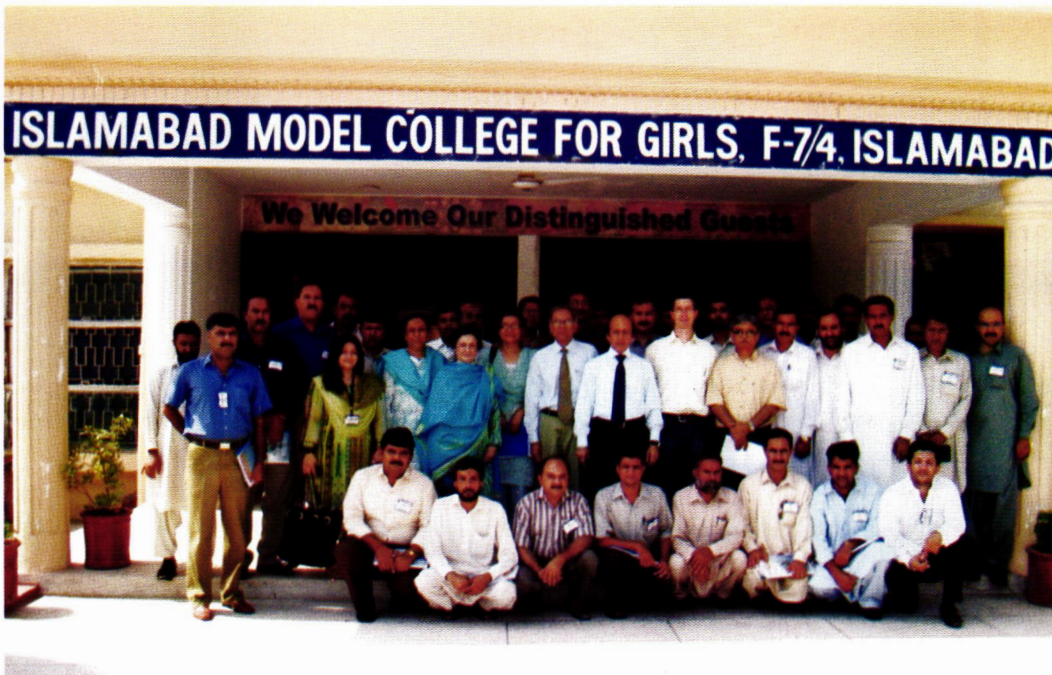
i. Future Plans:

- Strengthening of Science Caravans
- Strengthening of Science Centre, Faisalabad
- Establishment of 15 Science Centres
- Distribution of Science Posters and books among-3000 schools
- Establishment of Media Cell
- Organizing International Exhibition on Biodiversity in Pakistan (In collaboration with French Embassy, Pakistan/UNESCO)
- Establishment of Science Clubs in High schools
- Training of Science Popularization staff/officers
- S&T Expo/Fair (subject of availability of funds)
- Enhancement of all Science Popularization activities

PHOTO GALLERY



Expert from Centre Sciences, Orleans-France (Mr. Pierre Beauvallet) conducting the training workshop for Science Caravan Staff and facilitators



Group photo of the participants of workshop with Mr. Pierre Beauvallet, Centre Sciences-Orleans



Working Model of Robot Arm in Expo on Environment "The Earth's Future in Our Hands"



Model for recognition of animals (cows) in large farms / herds



Inauguration of the Environment Expo, jointly by Senator Azam Khan Swati Federal Minister of Science & Technology and H.E. Ambassador of France to Pakistan, Mr. Daniel Jouanneau at IMCG, F-7/4, Islamabad



Visit of the Expo



Ambassador of France to Pakistan, H.E. Mr. Daniel Jouanneau addressing the audience



Dignitaries, students, teachers and other participants of the inaugural ceremony of the Expo



*Dr. Manzoor H. Soomro, Chairman, PSF addressing the audience on opening ceremony of the Expo at Sukkur
Mr. Pierre SEILLANT, Consul General of France & Dr. Nilofer Shaikh, V.C. SALU, Khairpur are also present*



Ambassador of France to Pakistan, H.E. Mr. Daniel Jouanneau visiting the Expo at BZU, Multan



Students waiting for their turn to visit the Expo on Environment “The Earth's Future in Our Hands”



Students visiting the Environment Expo



Mr. Toauqeer Nasir, DG, Pakistan National Council of the Arts inaugurating science poster exhibition



A view of 19th Inter Board Science Poster Competition



Farewell of Mr. Fareed Khan Wazir, Chairman, PSF



Dr. Manzoor H. Soomro, Chairman-PSF and Ms. Farhat Rajpar, CSO during a press briefing



View of the PSF BoT meeting held on 23.1.2010



View of the PSF BoT meeting held on 7.4.2010



Ms. Farhat Rajpar, CSO expressing her views at International LAMAP Seminar (17-22 May 2010, France)



Group photo of the participants and organizers of LAMAP International Seminar at Paris



Dr. Manzoor H. Soomro awarding trophy/cash prize to winners of COMPEC-2010, organized by NUST



Ddr. Manzoor H. Soomro addressing the audience of COMPEC-2010 as Chief Guest



Girl students visiting Science Caravan Exhibition



Inside view of the Starlab Planetarium Show



Teachers and community members watching Planetarium Show



Students visiting Science Caravan Exhibition



Girls students taking keen interest in the Planetarium Show



External view of Inflatable Planetarium, newly purchased under UNESCO participation program

2. PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)

The statutory functions of Pakistan Museum of Natural History include research on the natural resources of the country like Flora, Fauna, Geology, Mineralogy, etc. besides public education on these aspects. PMNH has four Divisions, namely Botanical Sciences, Earth Sciences, Zoological Sciences Divisions and Public Services Division. The first three Divisions are mainly engaged in research activities while the fourth carries out development of display exhibits and arranges activities pertaining to public education. Keeping in view the its statutory functions the scientific and technical staff of PMNH remain busy carrying out various national and international collaborative research projects with various national and international institutions and agencies. The results of research work are published in the form of books and research articles in reputed national and international journals. The PMNH display centre depicts the natural history of Pakistan in the form of 3-dimensional dioramas, computerized exhibits and animated exhibits. The display centre is the prime source of informal public education on the natural resources of the country and thousands of visitors are befitted through it. As part of educational activities PMNH scientists arrange various workshops and training programmes for the students and teachers of educational institutions. The details of the activities carried out during the year are as follows.

2.1. EVENTS ORGANIZED:

2.1.1. World Science Day

PMNH observed World Science Day on 10th November, 2009. The day started with the inauguration of exhibition of natural history photographs at the PMNH Display Centre. Dr. M. Shahzad Mufti, Adviser, COMSATS, was the chief guest, who inaugurated the exhibition. Addressing a gathering of scientists and officers of PSF, PMNH and PASTIC, he shed light on the importance of science for peace and development.

2.1.2. International Symposium on “Conservation of Plant Genetic Diversity: Recent Techniques”

A one-day International Symposium on “Conservation of Plant Genetic Diversity: Recent Techniques” was organized at PMNH on March 13, 2010. PMNH, Tsukuba Association for Overseas Plant Genetic Resources (TASO-PGR) Japan in collaboration with Institute of Agro-Biotechnology and Genetic Resources (IABGR), National Research Centre (NARC) organized the symposium as a part of observing 2010 as the International Year of Biodiversity. During the technical session of the symposium a documentary on Solutions to Plants Conservation was also screened. Over 100 delegates from the country and abroad participated in the symposium and shared their experiences and views.

2.1.3. Training Workshop on Analysis of Ecological Data

PMNH in collaboration with Snow Leopard Trust (SLT) organized a two-day international workshop on “Modern Techniques for the Analysis of Ecological Data” from September 29-30, 2009. The workshop was aimed at capacity building of the participants in designing ecological studies and the analyses of simple to complex ecological data. More than 70 scientists, researchers, wildlife managers, teachers and professors of universities from all over Pakistan participated in the workshop. Dr. Shahzad A. Mufti, Advisor, COMSATS Institute of Information Technology was the Chief Guest at inaugural ceremony. Dr. Richard Bischof, Research Fellow of Norwegian University of Life Sciences, Norway, an expert in ecological analysis and modeling conducted the workshop as Resource Person.

2.1.4. Biodiversity Week

PMNH arranged weeklong educational activities from May 17-24 to celebrate 2010 as International Year of Biodiversity declared by the United Nations. The Biodiversity Celebrations started on May 17 with a three-day art workshop titled “Nature Through Art” at PMNH. Some 45 students, under-15 years of age, from eight educational institutions took part in the art workshop. A one-day workshop titled ‘Understanding

Nature' organized on May 18, 2010, for media persons. Twenty-nine journalists from various media organizations, both print and electronic, participated in the workshop. A Speech Competition among students from the educational institutions of the twin cities was organized on May 19, 2010 at PMNH. Students from 12 public and private sector educational institutions of Rawalpindi and Islamabad participated in the competition. A Quiz Competition was arranged among schoolchildren on May 20, 2010. Some 10 teams from the public and private sector educational institutions participated in the competition. The winners were awarded prizes and certificates were distributed to all the participants of the quiz competition. A ceremony was organized on May 24, 2010 to award prizes and certificates to the winners of different competitions in connection with celebrations of World Biodiversity Day and Year of Biodiversity 2010.

2.1.5. MoU with Zoological Survey Department, Karachi

PMNH and Zoological Survey Department (Ministry of Environment) have signed an MoU regarding preservation and maintenance of natural history specimens of Zoological Survey Department for scientific studies, conservation and educational purposes. As a result of this MoU all preserved and stuffed natural history specimens of Natural History Museum, Karachi (a sub-office of Zoological Survey Department) would be transferred to Zoological Sciences Division of PMNH along with the relevant data, catalogue registers, storage cabinets, jars etc. Mr. Abdul Wahab, Director Zoological Survey Department along with his two senior officers represented his department. As a result of this MoU, PMNH would get thousands of valuable specimens to strengthen his reference collection and educational activities. Some of these natural history specimens belong to the pre-partition period and are literally irreplaceable.

2.2. VISITS TO PMNH

2.2.1. Visit of French Delegation

A 2-member delegation comprising Dr. Olivier Bergossi, Higher Education & Scientific Attache, Embassy of France in Islamabad and the Trainer of "Environment

Expo” Mr. Pierre Beauvallet from Scientific, Technical, Industrial and Cultural Centre (CCSTI), France visited PMNH on Sep. 28, 2009. Dr. Azhar Hasan, Chairman PSF welcomed them at PMNH. They visited the laboratories and galleries of the museum and held a meeting to discuss various issues for strengthening scientific and technical cooperation among Pakistani and French institutions. The meeting was also attended by Dr. Khawaja Yaldram, technical Expert, Dr. Manzoor H. Soomro, Member Science, Mrs. Shaheen Khan, Secretary, PSF and the Director of PSF and PASTIC. Keeping in view the expertise of Mr. Pierre Beauvallet in exhibit designing, the possibilities of future interaction were also discussed.

2.2.2. Visit of Secretary Ministry of S&T

Mr. K. B. Rind, Secretary Ministry of Science & Technology visited PMNH on January 6, 2010. Some high officials of the Ministry were also accompanying him. Pakistan Science Foundation (PSF) Chairman Mr. Farid Khan Wazir, PSF Member Science Dr. Syed Shahid Hussain, PSF Secretary Mrs. Shaheen Khan and PMNH Director General Dr Syed Azhar Hasan welcomed the Secretary on his arrival at PMNH. Dr Syed Azhar Hasan gave a detailed presentation to the Secretary about the research and educational activities of the Museum and its achievements and future plans. Later, Mr. KB Rind visited different galleries of the Museum and appreciated the research and educational aspects of the displays. He assured the Museum authorities of Ministry’s full support to its research and educational programmes.

2.2.3. Visit of Participants of 6th Mid Career Management Course

A group of 26 officers, comprising participants of the 6th Mid Career Management Course designed for BPS-18 officers of various occupational groups and the faculty members of National Management College (Mid Career Management Wing) Lahore, visited Pakistan Museum of Natural History (PMNH) on July 28, 2009 as a part of their training. Dr. Manzoor Hussain Soomro, ex-Director General, PMNH gave a multi-media presentation to the participants about the PMNH. The presentation was followed by visit of the guests to display galleries of PMNH. The PMNH scientist explained different exhibits to the officers, who took keen interest in different

dioramas presenting the natural history of Pakistan. The displays of biodiversity problems and animated exhibits were of special interest to them. Mr. Faris Rahman, the faculty member of National Management College said the visit of civil service officers to the PMNH was of immense importance, as it would apprise them about the natural resources of Pakistan and their sustainable use. He presented a souvenir of the National Management College to the DG, PMNH.

2.2.4 Visit of Executive Director, COMSATS

Dr. Imtinan Elahi Qureshi, Executive Director, COMSATS, visited PMNH on February 20, 2010. PMNH Director General Dr. S. Azhar Hasan and Directors of the Science Divisions received the distinguished guest on his arrival at PMNH. Possibilities of cooperation between the two organizations in the fields of science and technology were discussed. Dr. Qureshi visited different display galleries of Museum and the efforts of PMNH to document the natural history of Pakistan and educate the general public, especially the students.

2.2.5. Visit of Ex-Senator Akram Zaki

Ex-Senator and former Secretary Foreign Affairs Akram Zaki along with his family members paid a visit to PMNH on May 6, 2010. Dr. Syed Azhar Hasan, Director General, PMNH briefed the Senator about the strength and functioning of the Museum. The guests visited different galleries of the Museum and took keen interest in natural history display. The PMNH scientists briefed the guests about their research activities. The Senator lauded the PMNH research and educational pursuits. He said the Museum of was playing an important role in documentation and conservation of natural history.

2.2.6. Visit of Afghan Minister/Senior Advisor to president

Afghanistan Minister and Senior Advisor to the President on Mines and Energy Professor Dr. A. Rehman Ashraf along with his entourage visited PMNH on April 24, 2010. During his visit the guests went around different display galleries of the Museum. The Minister took keen interest in Gems, Palaeo and Tethy's galleries. He termed the displays wonderful and very informative and educational.

2.3. FIELD WORK:

PMNH scientists carried out fieldwork in various locations in Balochistan, Sindh, Punjab, NWFP, Northern Areas and AJK for the collection of samples of animals, plants, rocks, minerals and fossils along with field data and photography under various ongoing research projects. Some 30,000 natural history specimens were collected. These were preserved in the PMNH Repository of natural history specimens.

2.4. LABORATORY WORK:

- Identified and catalogued 470 vertebrates and 78 invertebrates.
- Took morphometric data of 5 fishes recently collected from Gilgit-Baltistan
- A new species of Geko discovered and took morphometric data of 15 Geko specimens for detailed studies as possible new species.
- Seventeen animals skins prepared
- Thirty animals (mammals and reptiles) were received and skinned from Loibhar National Park, Islamabad Zoo, Azad Jammu & Kashmir Wildlife Department and Bansragali National Park.
- Petrographic studies of 5 thin sections of ophiolite rocks of MKT zone were carried out.
- Soaked and washed sediments for small mammal fossils recovery.
- Identified 530 specimens of higher and 500 of lower plants.
- Systematically rearranged 3000 specimens of higher plants.
- Five students of B.Sc. (Hons.) Agriculture in Entomology, acquired internship at ZSD.

2.5. RESEARCH PUBLICATIONS:

- Nadeem, M.S., Asif, M., Mahmood, T., (2009): A Rare Skink, *Novoeumeces blythianus*, Recorded from Nag Valley, Kharan, Balochistan. *Pakistan J. Zool.*, vol. 41(5), pp. 416-417, 2009.
- Masroor, R. 2009. A new species of *Cyrtopodion* (Sauria; Gekkonidae) from Deh Akro-II, Wetland Complex, Nawabsahah, Sindh, Pakistan. *ZooTaxa*, 2243: 57-67.
- Masroor, R. 2009. Description of new species of *Eumeces* (Sauria: Scincidae) from Pakistan. *Zootaxa*, 2161: 33-46.
- Fritz, U. Auer, M., Chirikova, M.A., Duysebayeva, T.N., Eremchenko, V.K., Kami, H.G., Kashkarov, R.D., Masroor, R., Moodley, Y., Pindrani, A., Široký, P., and Hundsdörfer, A.K. 2009. Mitochondrial diversity of the widespread Central Asian steppe tortoise (*Testudo horsfieldii* Gray, 1844): implications for taxonomy and relocation of confiscated tortoises. *Amphibia-Reptilia*, 30 (2): 245-257.
- Qureshi, R.A., Ghufuran, M.A., Gilani, S.A., Yousaf, Z., Abas, G. & Batool, A. 2009. Indigenous medicinal plants used by local women in southern Himalyan regioes of Pakistan. *Pakistan Journal of Botany*, 41(1): 19-25.
- Jalalani, M.I., Leghari, M.K. & Arbani, S.N. 2009. Distribution of freshwater algal species in Rawal Dam and adjacent areas of Islamabad during 2007. *International Journal of Phycology and Phyco-chemistry*, 5(1): 25-34.
- Jagoutz, O. E., Burg, J. P., Hussain, S., Dawood, H., Pattke, T., Iizuka, T., Maruyama, S., 2009. Construction of the granitoid crust of an island arc part I: geochronological and geochemical constraints from plutonic Kohistan (NW Pakistan). *Contrib. Mineral. Petrol.* DOI 10.1007/s00410-009-0408-3
- Rafique, M., Nawaz M A., and Asif, M. 2010. Mammalian fauna of Chagai Desert and adjoining areas. *Proc. Pakistan Acad. Sci.*47 (1): 19-24.2010
- Feroze A., Malik S.A. and Kilpatrick W. C. 2010. Phylogenetic relationships of medically important vipers of Pakistan inferred from Cytochrome *b* sequences. *The Journal of Animal and Plant Sciences*, 20(3), 147-157.
- Mahmood, K., Papp, J. & Quicke, D. 2010. Two new Afrotropical genera and species of Braconine wasps (Hymenoptera: Braconidae) with descriptions of new species. *ZooTaxa*, 2476, 14-22.
- Leghari, M.K., Idris, M., Ahmed, I. 2010. Qualitative, quantitative and vertical distributions of Blue-green Algal species at Tobacco field of Mardan during 2006. *Int. Journ. Phycochem.* 6(10): 21-28.

- **Gilani, S.A., Qureshi, R.A., Khan, A.A. & Potter, D.** 2010. Morphological characterization of the pollens of selected species of *Prunus* Linn. from Northern Pakistan. *African Journ. Biotech.*, **9(20)**: 2872-2879.
- **Khan, R.A., Khan, M.R., Sahreen, S.** 2010. Evaluation of *Launea procumbens* in renal disorders: a rat model. *Journal of Ethnopharmacology*, **128**: 452-461.
- **Sahreen, S., Khan, M.R., Khan, R.A.** 2010. Evaluation of antioxidant activities of various solvent extracts of *Carissa opaca* fruits. *Food Chemistry*, **122**:1205-1211.
- **Sahreen, S., Khan, M.A., Khan, M.R.** 2010. Leaf epidermal anatomy as a taxonomic feature in the genus *Silene* from Pakistan. *Biodicon*, **3(1)**: 93-102.
- **Brühwiler, T., Hugo, B., David, W., Elke, H., Peter, H., Roohi, G., Rehman, K., Yaseen, A.** 2010. Smithian (early Triassic) Ammonoids from the Salt Range, Pakistan. *Journal Paleontology* (Manuscript Id: PALA-01-10-2975-SP).
- **Roohi, G., Hasan, S.A. & Azeem, U.** 2010. Biodiversity of Pakistan: Database and Global Networking (BGN). Proceedings of TWOWS Fourth General Assembly and International Conference on Women Scientists in a Changing World held on 27 - 30 June 2010. pp. 80-81.
- **Heuberger, S. Celier, B., Burg, J.- P., Chuadry, M. N., Dawood, H., & Hussain, S. S.,** 2010 Paleostress regimes from brittle structures of the Karakoram- Kohistan suture zone and surroundings areas of NW Pakistan. *Jour. Asian Earth Sci.*, **38**: 307-335.
- **Antoine, P-O., Downing, K.F., Crochet, J-Y., Duranthon, F., Flynn, L.J., Marivaux, L., Metais, G., Rajpar, A. R. & Roohi, G.** 2010. A revision of *Aceratherium blanfordi* Lydekker, 1884 (Mammalia: Rhinocerotidae) from the early Miocene of Pakistan: Postcranials as a key. *Zoological Journ. Linnean Society. London*, 2010. 160, pp 139-194.

2.6. TECHNICAL REPORTS:

Submitted the following Technical Reports:

- Second annual technical report of PSF-funded three-year project on economically important plants of the Potwar plaeau and the Galiat
- Two technical reports on Better Management Practices in Cotton fields.
- Ten baseline study reports on the Fauna of wetlands of Northern Pakistan.

2.7. INTERNATIONAL COLLABORATIVE RESEARCH PROJECTS:

On-going

- “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.

2.8. NATIONAL COLLABORATIVE PROJECTS:

- “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).

2.9. NATIONAL RESEARCH PROJECTS:

PSF-funded research projects completed:

- “Sedimentological and depositional environment of Datta Formation in Western Salt Range of Potwar sub-basin”.
- “Biostratigraphic Zonation of Lockhart Limestone of Paleocene age in Nilawahan and Kalrawahan Areas of Central Salt Range, Pakistan”.

On-going PSF-funded research projects:

- “Studies on algae of major rivers of Punjab (Pakistan) with special emphasis on its consumption by economically important fishes”.
- “Taxonomic and Ethnobotanical studies of Economically Important Plants of Potwar plateau and the Galiat with reference to their trade”.

2.10. DESIGN AND DISPLAY:

- Moulding of Sedimentary section is completed for Rocks & Minerals Display.
- Designed invitation card, banners, certificates, bags etc. for Biodiversity Week activities.
- Completed Garden Sculptures besides the VOG building.

- The art pieces created by the students in 3-day Art Workshop were displayed in the temporary exhibits Gallery for viewing of students & general public.
- Up-gradation of Interior of Animated Exhibits Hall No.1 is in progress.
- Maintained hardware/software for Virtual Orientation Gallery (VOG) of PMNH Display Centre and updated information in the gallery.

2.11. GUIDED TOUR OF PMNH/EDUCATIONAL ACTIVITIES:

- The number of visitors to PMNH from July 2009 to June 2009 stood at 24,569 people including 14999 students and teachers, 9464 general visitors and 106 foreigners.
- Guided tours were arranged for a large number of student groups and eminent visitors.
- Arranged lectures/film shows in PMNH for students of various Schools, Colleges and Universities.

2.12. SERVICES RENDERED TO OTHER ORGANIZATIONS:

Senior PMNH scientists conducted viva voce of 8 M. Phil. students of Quaid-i-Azam University and Kohat University of Science & Technology NWFP They also guided 2 Ph. D. and 4 M. Phil. students of PMAS Arid Agriculture University, Rawalpindi, and COMSATS Institute of Information Technology, Abbottabad. Provided expert guidance to 5 students of University of Azad Jammu and Kashmir, Muzaffarabad and an M.Sc. (Hons.) student of Agricultural University, Peshawar.

2.13. MEETINGS/ CONFERENCES/TRAININGS/ WORKSHOPS ATTENDED:

- Dr. M. Rafique, Curator and Acting Director, ZSD and Dr. Saleem Ahmad, Curator, BSD attended a meeting of stakeholders of Strategic Approach to International Chemicals Management (SAICM) on 7th July, 2009 in Islamabad. SAICM is a pilot project of United Nations Institute for Training and Research (UNITAR) and aims towards development of an integrated approach to chemicals management, especially their proper disposal.
- Dr. Khalid Mahmood completed nine months (November 2008-August 2009) Post Doctorate study on "Systematics of Braconid Wasps (Braconidae; Hymenoptera)" from Natural History Museum, London.

- Mr. Shabir Ali Amir completed training course entitled “First Aid/ CPR Training Course” at Pakistan Wetlands Programme, Islamabad from 14th -16th July 2009.
- Ms Ghazala Roohi, Curator, Earth Sciences Division, PMNH, availed month internship on September-October, 2009 at the University of Toulouse, and other Natural History Museums of France (having Pakistani fossils collection). Cultural Section of the French Embassy in Islamabad provided financial assistance for this internship.
- Dr. Khalid Mahmood, Associate Curator, ZSD, participated in “Asian Regional Meeting and Biodiversity Informatics Workshop” held in Bangkok, Thailand organized by Global Biodiversity Information Facility (GBIF).
- Ms. Sumaira Sahreen, Research Associate, BSD, attended the “37th Postgraduate training course on nuclear and other advanced techniques in agricultural and biological research” on 7-18th December, 2009 from Nuclear Institute of Agriculture and Biology (NIAB), Faisalabad.
- Ms. Sadia Munir, Research Associate, BSD, participated in a 3 days training course on “Advanced data handling techniques using MS Office” at PASTIC on 19th to 21st November, 2009.
- Mr. Mukhtiar Khan of ZSD completed computer training on “Presentation through MS Power Point” at Pakistan Computer Bureau, Islamabad on 16th to 21st November, 2009.
- Mr. Mishkat Ullah Research Associate ZSD Attended training course on “Wetlands management as multi-stakeholder process” at Pakistan Wetland Program Management Unit, Islamabad from 20th-22nd January 2010.
- Mr. Mshkat Ullah, Research Associate ZSD, attended two days training course on “Community Empowerment for Sustainable Wetlands Management”, from 20th-21st April 2010 at Pakistan Wetland Programme Management Unit, Islamabad.
- Mr. Muhammad Asif Research Associate ZSD joined training course on “Introductory Training Course on Monitoring and Evaluation” at Pakistan Wetland Program Management Unit, Islamabad from 25th -26th February 2010.
- All PMNH officers participated in “Photography Training Program” held at PMNH during March 2010.

2.14. LECTURES DELIVERED:

- Dr. S. Azhar Hasan, Director General, PMNH, delivered a Keynote address entitled “Biodiversity and ecosystem services in changing climate” at National Executive

Management Seminar (NEMS) on Application of Nuclear Techniques in Water Quality Management and Ecological Research” organized by Pakistan Institute of Nuclear Science and Technology (PINSTECH), Islamabad on May 10-12.

- Dr. S. Azhar Hasan, Director General, PMNH, participated as Biodiversity Expert in Sony thirty TV channel programme telecast on Environment Day.
- Interview of Dr. S. Azhar Hasan, Director General, PMNH, was recorded and telecast by several TV channels during Biodiversity Week celebrated by PMNH.
- In-house lectures: To improve presentation skills and create inter-divisional awareness, a programme of in-house lectures was conducted. Lectures were delivered by the scientists of PMNH on their research work on plants, animals, rocks, minerals and fossils.

2.15. HIGHER STUDIES:

- Dr. Khalid Mahmood joined PMNH after completion of 9 months Post Doctorate study on Entomology from Natural History Museum London. He has been awarded Fellowship of the Royal Entomological Society, UK.
- Ms. Rizwana Khanum, Research Associate, BSD, proceeded on one year study leave on 10th October, 2009 for Ph. D. study in the Department of Plant Sciences, Quaid-i-Azam University, Islamabad. Ms. Shahnaz Zakia, Research Associate, BSD, also went on one year study leave on 20th November, 2009 for M. Sc. (Hons.) study at PMAS University of Arid Agriculture, Rawalpindi.

2.16. OTHER ACTIVITIES

PMNH has planned to develop a mini botanical garden in its premises. The work will be carried out through the financial assistance of Tsukuba Association Supporting PGR-activities Overseas (TASO-PGR), Ibaraki, Tsukuba, Japan. In this connection the preliminary work of leveling the ground has already been done.

PHOTO GALLERY PMNH



Media Workshop on "Understanding Nature" held on May 18, 2010 in connection with Biodiversity Week



Inauguration of Art Exhibition at PMNH on 24th May, 2010



Visit of Secretary Ministry of Science & Technology Mr. K. B. Rind to PMNH Display Centre on January 6, 2010



Visit of participants of 6th Mid-Career Management Course to PMNH on July 28, 2009.

3. PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE (PASTIC)

PASTIC is an ISO 9001: 2000 certified S & T Information Provider and is the oldest organization in the field of S&T information management and dissemination serving as a gateway for access to global S&T information catering to the needs of the researchers in all areas of Science and Technology. Users of PASTIC services include researchers, academicians, scientists, engineers, policy makers & planners, entrepreneurs and the industry. Collaboration with different organizations and agencies enhances the scope of information that is offered to clients and helps PASTIC to respond to the diverse needs of a broad community of users.

PASTIC National Centre is housed in its own building at Quaid-e-Azam University Campus, Islamabad with comprehensive information resources in different fields of Science and Technology. Its six Sub-Centres are working in different cities, viz. Karachi, Lahore, Peshawar, Quetta, Faisalabad and Muzaffarabad all having access to global information resources and capable of disseminating information to their users. Its sanctioned strength is 163 including Technical and Administrative Staff.

3.1 AIMS & 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, publish and update reference information publications, i.e., Union Catalogue of Scientific Periodicals in the Libraries of Pakistan, Directory of S&T Periodicals of Pakistan, and Technology Information Bulletin, etc.
- To publish an abstracting and indexing journal entitled "Pakistan Science Abstracts".

3.2. 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 those which are essential for undertaking research and development for socio-economic uplift of the country. The activities undertaken during the period, July 2009 to June 2010 are briefly described below:

3.3. DOCUMENT PROCUREMENT AND SUPPLY SERVICE

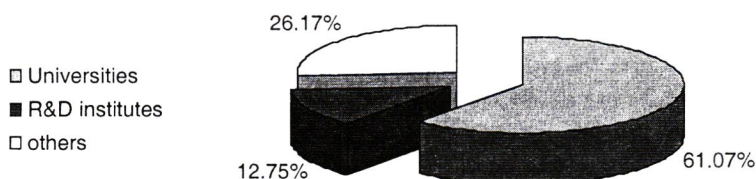
Under the Document Procurement and Supply Service, requests were received from different R&D organizations for supply of reprints of research articles, conference papers and reports, etc. In order to fulfill the demand of clients reprints of 1484 articles were procured either from local sources or from abroad, and supplied to 511 researchers. Major user organizations included 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; PIEAS; 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; HEJ Research Institute of Chemistry; University of Karachi, Karachi and University of Agriculture, Faisalabad, University of Peshawar, etc. 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 who shared 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. Agricultural University, Peshawar
20. University of Engineering & Technology, Lahore.
21. Pakistan Institute of Medical Sciences, Islamabad, etc

For foreign procurement of articles mainly British Library was used. To expedite the procurement process PASTIC uses e-mail contacts so that information delivery is quick and delays are minimized. Major breakup of the types of user organizations is as follows:

Universities, R & D Institutes and Others



3.4. 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 6,10,528 abstracts/references on various S&T topics were supplied to 3777 research workers and other users during the period under review from the following databases.

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. Em-Biology Online (Biology & Medicine)
14. CSA Pollution Abstract Online (Environmental Pollution)

15. National Technical Information Service (NTIS – USA)
16. 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)

3.5. ABSTRACTING AND INDEXING SERVICE

a. Pakistan Science Abstracts (PSA)

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 four issues of Pakistan Science Abstracts of 2008 and ten issues of Pakistan Science Abstracts of 2009 was carried out and completed. PSAs in following ten disciplines were published during the year 2009-10.

- Agricultural Sciences, 2008, Vol.46-A, 2009, Vol.47-A
- Animal Sciences, 2009, Vol.47-D
- Biochemistry & Biotechnology, 2009, Vol.47-B
- Chemical & Pharmaceutical Sciences, 2008, Vol.46-C, 2009, Vol.47-C

- Earth & Environmental Sciences, 2009, Vol.47-E
- Information Communication & Engineering Sciences, 2009, Vol.47-I
- Mathematics & Statistics, 2009, Vol.47-G
- Medical Sciences, 2009, Vol.47-H
- Physics, 2008, Vol.46-F, 2009, Vol.47-F
- Plant Sciences, 2008, Vol.46-J, 2009, Vol.47-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.

3.6. TECHNOLOGY INFORMATION SERVICE

Technology Information Section is aimed at provision and dissemination of Technological Information Service particularly to Engineers, Entrepreneurs, SMEs and the Industry. The aim is to facilitate growth, potential and competitiveness among SMEs at national and international levels. Under this service following activities were carried out.

- Trade and Technology Database which is based on information pertaining to trade and technology offers and business opportunities in 14 different sectors, i.e., Agro-Industries, Pharmaceuticals, Energy, Electronics, Business Opportunities, Food Processing, Machinery, Bio-technology, Textiles, Fisheries, Building Materials, Chemicals, Packaging, Mining was updated. 5600 records were incorporated in the database.
- Bimonthly Trade and Technology news e-bulletin entitled “*Technology Roundup*” was launched. It covers information such as latest technology news, news pertaining to technology events and trade & technology offers. Six issues of this news bulletin were brought out online.
- Seminars on Technology Information Services for promotion of Industrial activities as well as creating awareness about S&T information services were organized at the Chambers of Commerce & Industry in Rawalpindi, Faisalabad and Peshawar in collaboration with respective chambers.

TECHNOLOGY ROUNDUP
A NEWS BULLETIN FROM
Technology Information Services (TIS)
Pakistan Scientific & Technological Information Centre
March-April 2018 Vol. 3, No. 2

Editorial Board
Patron
 Muhammad Farid Khan Waris
 Chairman PASTIC
Executive Editor
 Dr. Mansoor Hossain Sumara
Editors
 Ms. Najam Akshidde
 Mr. M. Asif Khan
 Dr. Sameer Taseer
 Ms. Sabina Majid
Composer
 Mr. Shadia Parveen

Tech News Headlines

- Climate: Air Pollution and Higher Temperatures Cause...
- Antibiotic Resistant Bacteria Cause High Number of Deaths in Mexico
- New Strategy for the U.S. Computer Bug: Universally Shared Backdoor Data Storage
- Nations Call for Energy-Related Production
- Super-Fiber: Composite Engineers Develop Carbon Nanotube and Inorganic Fibers
- Engineering for the World of 2050
- Smart Home: Research Reveals how to Personalize Solar Energy
- Breakthrough in an Antimicrobial to Kill Pathogens of Nanobacteria
- Learning to Control Cancer: Scientists Discover How to Regulate Epigenetic Gene Expression
- Health Care: Computer Models Predicted Outcomes of an Open Heart Valve Disease
- Biotech: Improved Bioreactors Can Produce and Regulate Fuel
- Nanoparticle: Improved Design Shows that Nanoscale Objects Behave like the Bulk

Tech & Trade Offers

- Industrial Automation & Control Solutions
- Hitech Power UPS
- Solutions for Automotive and Industries

Forthcoming Tech Events

- Power and Electronics Asia 2018
- PHE 2018: Pakistan Oil, Gas and Energy Exhibition
- 7th International Plastic and Packaging Industry Exhibition
- Pharmatech 2018
- KAS 2018
- Water Energy, New Water: Next the Planet International Conference and Exhibition

PASTIC National Centre
Quaid-e-Azam University Campus
P.O. Box 1217, Islamabad

Phone: 071-9246101-4, 9246111
Fax: 071-9246112
Email: info@pastic.gov.pk
Web: www.pastic.gov.pk

TECHNOLOGY ROUNDUP
A NEWS BULLETIN FROM
Technology Information Services (TIS)
Pakistan Scientific & Technological Information Centre
May-June 2018 Vol. 3, No. 3

Editorial Board
Patron Executive Editor
 Dr. Mansoor Hossain Sumara
 Chairman PASTIC
Editors
 Ms. Najam Akshidde
 Mr. M. Asif Khan
 Dr. Sameer Taseer
 Ms. Sabina Majid
Composer
 Mr. Shadia Parveen

Tech News Headlines

- Solar driven homogeneous water oxidation catalyst
- China: The Secret Pollutant detected in water way
- New way to make water
- Credit rating: Viewing through the data jungle
- World's first Molecular Transistor
- Biomedical Computers
- Battery: Powerful Vehicle to be revolutionized by new technology
- New Solar panel distribution system

Tech & Trade Offers

- E-PCB Cleaners and Test applications
- Solar Vastak Part Machine
- E-PCB Cleaning Machine

Forthcoming Tech Events

- European Business Conference and Exhibition
- Pharmatech 2018
- 7th International Plastic and Packaging Industry Exhibition
- Asia Pacific Development Conference 2018
- I-ICE 2018: International Conference on Business Technology and Engineering
- IBC 2018 World Congress of Industrial Biotechnology

PASTIC National Centre
Quaid-e-Azam University Campus
P.O. Box 1217, Islamabad

Phone: 071-9246101-4, 9246111
Fax: 071-9246112
Email: info@pastic.gov.pk
Web: www.pastic.gov.pk

• **Research & Industrial Linkage Initiative (MoUs signed):**

Information plays a potential role in research as well as in developmental activities particularly industrial development. Therefore Information is also used by industrial sector for growth of industry, value addition in products, business development, and enhancing exports. Therefore PASTIC took an initiative to develop linkages with chamber of commerce and industry and Institute of Research Promotion for bridging the gap between industry and research institutions and promotion of research and development culture in the country. These linkages are necessary for bringing together academia and industry for close relation between research objectives and industry priorities and promoting indigenous technologies.



Dr. Manzoor Hussain Soomro, D.G. PASTIC and Mr. Kashif Shabir, President, RCCI signing MoU at Rawalpindi Chamber of Commerce & Industry, Rawalpindi, Engineer Abdul Rasheed Khan, Advisor to Minister for Science & Technology and Officers of PASTIC and RCCI look on



Dr. Manzoor Hussain Soomro, D.G. PASTIC and Mr. Abid H.K. Sherwani, CEO, IRP signing MoU at Islamabad. Engineer Abdul Rasheed Khan, Advisor to Minister for Science & Technology looks on

In this regard two MoUs were signed by PASTIC; one with the Institute of Research Promotion (IRP), Lahore and other with Rawalpindi Chamber of Commerce & Industry (RCCI), Rawalpindi. For implementation of MoUs action plans have also been prepared to be undertaken during 2010-11. It is hoped that these MoUs will go a long way in developing

industrial research culture and empowering the industrial sector with innovations leading to the promotion of competitiveness, productivity and socio-economic development.

3.7. 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, acquisition of published library material and library automation activity remained in progress. PASTIC library has a collection of more than 8,600 books on natural & applied sciences, over 1550 titles of national & international S&T journals (27,8500 issues) and 9000 miscellaneous documents and reports.

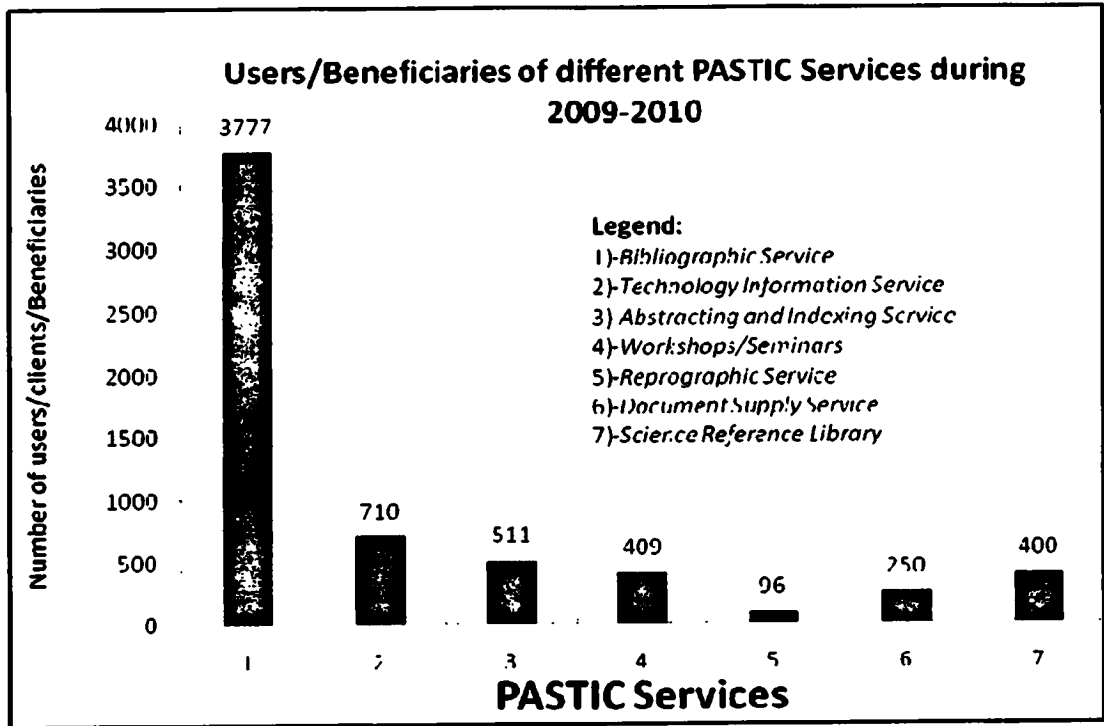
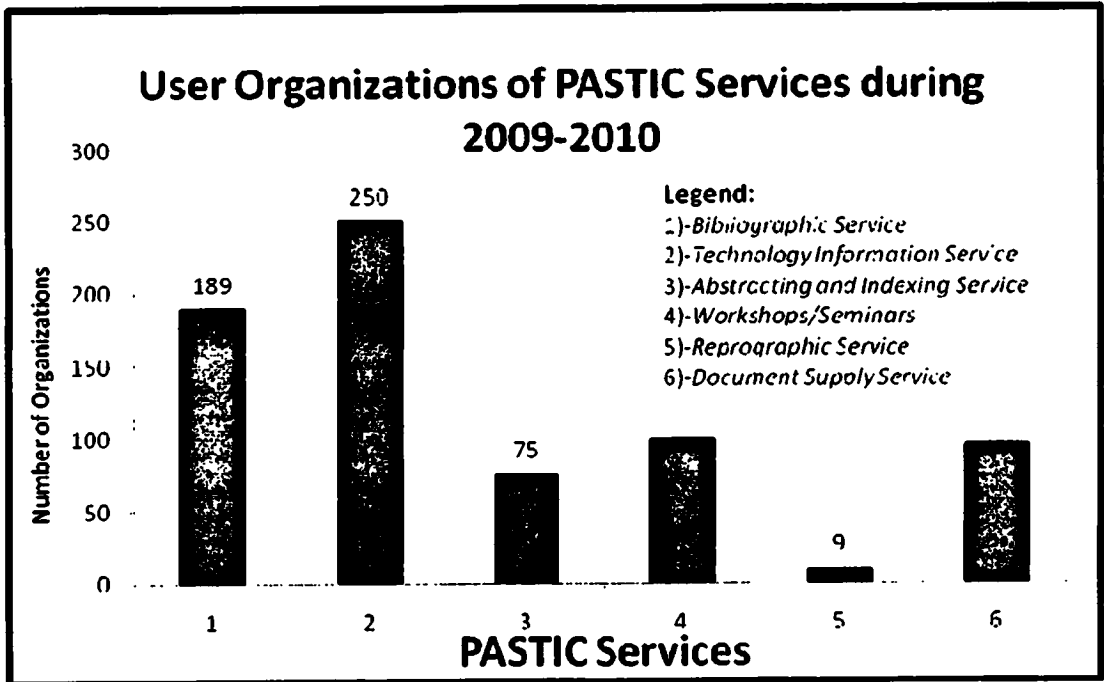
During 2009-10, about 710 researchers visited PASTIC Library for reference purpose, reading and photocopying services. Besides, library received 636 issues of different national and international journals. In addition 95 books, 75 reports, miscellaneous documents were acquired, processed and shelved for use. Library bulletin of fresh arrivals was regularly published during the period under review and distributed among relevant circles.

3.8. REPROGRAPHIC SERVICE

The Reprographic Section of PASTIC has facilities ranging from photocopying to offset printing for its printing requirements and for providing printing services to other S&T organizations. During the year 2009-10 about 96 printing jobs were undertaken for 09 R&D organizations including composing, offset and laser printings.

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". Main objectives of the project are; Enhancing the printing quality of PASTIC Press; Strengthening printing services by inducting professionally and technically skilled workers; Introduction of latest computer graphic software technology; Facilitating the S&T and R&D organizations for their printing requirement. Out of these, major objective of the project was development of infrastructure with all types of latest

printing facilities which was to be achieved through acquisition of equipments and renovation work of Reprography Unit for installation of purchased equipments and creating good working environment. In this regard 60% renovation work of Reprography Unit was completed and following equipments were purchased after completing all codal formalities and installed in Reprography Unit. *Two Pentium-IV Computers; One Digital Camera; One Laptop Computer; Two Laser Printers; One Scanner; One Color Laser Printer; One Photocopier.*



3.9. INTERNATIONAL LIAISON

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

3.9.1 UNESCO:

PASTIC is responsible for the distribution of UNESCO developed software/packages such as WINISIS & IDAMS and also provides training on WINISIS package which is used for library management and bibliographic databases. WINISIS Package was provided to 74 individual library and 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 Sargodha and Khairpur.

3.9.2 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. Following activities were undertaken during the period under review.

- Director, PASTIC participated in 15th Governing Board Meeting of SAARC Documentation Centre from 12-13 November, 2009 at New Dehli, India.
- 23 titles of research and abstracting journals of 2009 covering all major disciplines of science and technology being published by National Institute of Science Communication and Information Resources (NISCAIR), India were regularly received free of cost.

Activities of exchange of information with SAARC Documentation Centre were carried out for fulfilling the information requirements of Scientists and R&D workers. Cases of nomination were initiated and processed for availing the training opportunities offered by SAARC Documentation Centre.

3.9.3 BILATERAL COOPERATION:

- S&T Cooperation proposals were prepared for bilateral cooperation in the field of Information Exchange with China, Thailand, Germany, Mongolia, Kazakhstan, Uzbekistan, Egypt and Norway.
- Proposal for Pak-3004 frame agreement with Norway for institutional cooperation programme was prepared.
- Brief for the 65th Session of the United Nations General Assembly was prepared. for Ministry of Science and Technology.

3.10. PASTIC INFORMATION SERVICE STALLS AT THE DOORSTEP OF USERS

PASTIC Service Stalls were arranged at 31 various departments of 14 Universities in several major cities of Pakistan and 8 R&D Institutions on different occasions. The aim of organizing the 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 as follows:

KARACHI & JAMSHORO

S.#	Date	Venue
1	27-08-09	Dr. Zia Uddinin Hospital Library, Clifton, Karachi
2	04-09-09	Sir Syed Engineering University, Karachi
3	19-09-09	Department of Microbiology, University of Karachi, Karachi
4	28-09-09	Department of Chemistry, University of Karachi, Karachi
5	30-09-09	Department of Microbiology, University of Karachi, Karachi
6	03-10-09	Department of Physics, University of Karachi, Karachi
7	05-10-09	Department of Genetics, University of Karachi, Karachi

8	06-10-09	Department of Botany, University of Karachi, Karachi
9	10-10-09	Department of Physiology, University of Karachi, Karachi
10	12-10-09	Department of Zoology, University of Karachi, Karachi
11	19-10-09	Dr. Mehmud Hussain Library, University of Karachi, Karachi
12	11-01-10	Allama I.I. Qazi Library, University of Sindh, Jamshoro
13	12-01-10	Department of Fresh Water Biology, University of Sindh, Jamshoro
14	13-01-10	Department of Civil Engineering, Mehran University of Engineering & Technology, Jamshoro
15	14-01-10	Department of Architecture, Mehran University of Engineering & Technology, Jamshoro
16	13-02-10	Department of Geology, University of Sindh, Jamshoro
17	09-03-10	Jinnah University for Women, Karachi
18	16-17 April, 2010	University of Karachi, Karachi
19	07-05-10	Shan Foods (Pvt.), Limited, Karachi

ISLAMABAD

20	05-01-10	NUST School of Electrical Engineering and Computer Sciences, Islamabad
21	6-7 April, 2010	Riphah International University, Islamabad
22	18-05-10	National Centre for Physics, QAU Campus, Islamabad
23	20-05-10	National Fertilizer Development Centre, Islamabad

LAHORE

24	14-11-09	University of Education, Township, Lahore
25	07-03-10	Government Science College, Lahore
26	07-04-10	Centre of Excellence in Molecular Biology (CEMB), Lahore
27	10-04-10	Government College University, Lahore
28	23-24 April, 2010	COMSATS Institute of Information Technology, Lahore
29	07-05-10	COMSATS Institute of Information Technology, Lahore
30	10-06-10	COMSATS Institute of Information Technology, Lahore

FAISALABAD & SARGODHA

31	06-10-09	Government College University, Faisalabad
32	08-10-09	National Textile University, Faisalabad
33	13-10-09	University of Agriculture, Faisalabad
34	14-10-09	University of Agriculture, Faisalabad
35	18-20 Oct, 2009	University of Agriculture, Faisalabad
36	19-11-09	University of Sargodha, Sargodha
37	09-02-10	University of Agriculture, Faisalabad
38	11-02-10	University of Agriculture, Faisalabad
39	17-02-10	Government College University, Faisalabad
40	03-03-10	Nuclear Institute of Agriculture and Biology, Faisalabad
41	08-03-10	Government College University, Faisalabad

42	23-03-10	University of Agriculture, Faisalabad
43	25-03-10	University of Agriculture, Faisalabad
44	27-04-10	Punjab Medical College, Faisalabad
45	25-06-10	National Institute of Biotechnology & Genetic Engineering, Faisalabad

PESHAWAR

46	08-03-10	Pakistan Forest Institute, Peshawar
47	13-03-10	Department of Environmental Sciences, University of Peshawar, Peshawar
48	22-03-10	Pakistan Forest Institute, Peshawar
49	09-06-10	Centre for Disaster Preparedness & Management, University of Peshawar, Peshawar

A J & K

50	08-03-10	University of Azad Jammu & Kashmir, Muzaffarabad
----	----------	--

QUETTA

51	08-03-10	Sardar Bahadur Khan Women University, Quetta
----	----------	--

PASTIC Services received a big boost through these stalls and a large number of users availed the services.

3.11. HUMAN RESOURCE DEVELOPMENT

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.

a. Trainings/Workshops/Seminars Organized

1. PASTIC-SZABIST-IPO seminar on “Recognizing & Respecting Intellectual Property Rights: Awareness & Issues” on July 09, 2009 at SZABIST, Islamabad. 100 Participants attended the seminar from Academia, S&T / R&D Organizations, Industry, Business Enterprises, etc. Presentations on Patents, Trademarks, Copyrights and Plagiarism were given by Resource persons from IPO-Pakistan.
2. A basic “Computer Training Course” at PASTIC I.T lab from July 21-23, 2009.
3. Seminar on “Value Addition in Industrial Activity through S&T Information and R&D Facilitation Services of PASTIC / PSF” on November 04, 2009 at Faisalabad in collaboration with Faisalabad Chamber of Commerce & Industry, Faisalabad.
4. Workshop on “Library Management” at Department of Library & Information Science, University of Sargodha, Sargodha from 18-20 November, 2009. Participants included library and information personnel from University of Sargodha and colleges in the city. The workshop focused on UNESCO developed software package “WINISIS” for which PASTIC is the sole distributor in the country. The package was also distributed amongst the participants.
5. A three day training on “Advance Data Handling Techniques Using Microsoft Office” at PASTIC from November 19-21, 2009. Five participants from PASTIC and PMNH were acquainted with advance data handling techniques using Microsoft Office for handling bulk data with planned approach in a simplified way.
6. Seminar on “Current Good Manufacturing Practices in Pharma Industry” on 6th February, 2010 at Peshawar in collaboration with Sarhad Chamber of Commerce & Industry, Peshawar. The seminar was attended by academia and the industry. The speakers from the industry deliberated upon their R&D and other issues, whereas the academia apprised them about the possible solutions through research. The seminar was an effort toward bridging the gap between academia and the industry.

7. Workshop on “Library and Information Management” from 27-29 April, 2010 at Khairpur in collaboration with Shah Abdul Latif University, Khairpur, Sindh. The workshop focused on training the librarians from SALU and its affiliated colleges as well as other colleges/ institutions around Khairpur. Thirty two librarians were trained and the library software was also distributed.
8. Seminar on “Awareness of PASTIC Information Services” at Sindh Agriculture University, Tandojam, Sindh on 30th April, 2010.
9. Seminar on “Information Security through Selection of Right Information Technology (IT) Management Framework” at PSF, Islamabad from 12-13th May, 2010. The objective was to create awareness about the importance of information security within organizations and adoption of the right management framework and to share knowledge and experiences in this field. The seminar also highlighted the Information security policy of the Government of Pakistan. Participants came from finance and banking sector, science & technology, higher education institutions, IT companies, Health sector, etc
10. Seminar on “Awareness of PASTIC Information Services” at Lasbella University of Agriculture, Water and Marine Sciences, Uthal on 18th May, 2010.
11. Seminar on “Awareness of PASTIC Information Services” at Dr. Ziauddin Hospital Library, Clifton, Karachi on 27th August, 2009.
12. Seminar on “Awareness of PASTIC Information Services” at University of Sindh, Jamshoro on 11th January, 2010.
13. Seminar on “Awareness of PASTIC Information Services” at Mehran University of Enigneering & Technology, Jamshoro on 13th January, 2010
14. Seminar on “Awareness of PASTIC Information Services” at Jinnah University of Women, Karachi on 9th March, 2010
15. Seminar on “Awareness of PASTIC Information Services” at IRP Seminar, University of Karachi on 16th April, 2010

16. Seminar on “Awareness of PASTIC Information Services” at IRP Seminar, University of Karachi on 17th April, 2010

17. Seminar on “Awareness of PASTIC Information Services” at Shan Foods (Pvt), Limited, Karachi on 7th May, 2010

b. Lectures / Presentations Delivered

1. Mr. Muhammad Aqil Khan, Additional Director (Doc) delivered a presentation on “S&T Information for Value Addition in Research & Development – Role of PASTIC” in PASTIC-FCCI Joint Seminar at Faisalabad

2. Mr. Saifullah Azeem, Senior System Analyst delivered a presentation on his MS/M.Phil research topic entitled “Automated Document Classification Techniques” at HELP University, Kuala Lumpur, Malaysia on 9th December 2009.

3. Mr. Ali Raza, Assistant Director (STI) delivered a presentation on “PASTIC-its Role and Services” in the IRP-COMSATS joint workshop on optimizing use of online resources on 7th May, 2010 at COMSATS, Lahore.

c. Meetings/Workshops/Trainings Attended

1. Ms. Nageen Ainuddin, Director PASTIC visited Geneva, Switzerland to attend “WHO International Consultation Meeting on Global Health Library” which was held from November 26-27, 09

2. Ms. Nageen Ainuddin, Director PASTIC visited New Delhi, India to attend 15th Governing Board Meeting of SAARC Documentation Centre held on November 12-13, 2009

3. Ms. Nageen Ainuddin, Director PASTIC and Muhammad Aqil Khan, Additional Director (Doc) held a meeting with Mian Shoukat Masud, President, Islamabad Chamber of Commerce and Industry for organizing a joint seminar for industry and initiating other collaborative activities

4. Ms. Nageen Ainuddin, Director, PASTIC, Additional Director (Doc) and Senior System Analyst held a meeting with Director General, NUST School of Electrical

Engineering and Computer Science (SEECs) for initiating collaborative programmes with NUST in IT Sector

5. Ms. Nageen Ainnuddin Director, PASTIC and Mr. Muhammad Aqil Khan Additional Director (Doc) attended a workshop on "Team Building" organized and conducted by National Productivity Organization at Islamabad Chamber of Commerce and Industry on August 10, 2009
6. Dr. Shaheen Shahzad, Sr. Scientific Information Officer attended the main ISEF Orientation Workshop organized by Intel Education on 18th August, 2009 at Islamabad
7. Mr. Muhammad Hasnain, Assistant Director (STI) attended 20th "All Pakistan Food Science Conference" on 22nd February, 2010 at National Institute of Food Science & Technology, University of Agriculture, Faisalabad
8. Mr. Muhammad Hasnain, Assistant Director (STI) attended International Seminar on "Vision for Pakistan's Agriculture: Challenges and Options" on 25th March, 2010 at University of Agriculture, Faisalabad
9. Mr. Muhammad Hasnain, Assistant Director (STI) attended "13th Congress of Soil Science Society of Pakistan" at Faisalabad
10. Mr. Muhammad Hasnain, Assistant Director (STI) attended one day workshop on "Writing Research Proposal" on 25th June, 2010 at Faisalabad
11. Syed Javed Mukhtar, Manager Technology Information attended a meeting on "Development of Genetic Resources, Traditional Knowledge, Folklore & Geographical Indications (GRTKF & GI) Database" on February 15, 2010 at Intellectual Property Organization of Pakistan (IPO-Pakistan) Headquarters, Islamabad
12. Mr. Ali Raza, Assistant Director (STI) attended a Workshop on "Social Media and Web Marketing for Pakistani Business" on 18th March, 2010 at University of Central Punjab, Lahore
13. Mr. Ali Raza, Assistant Director (STI) attended a seminar on "Enterprising Research University Industry Portal" on 18th March, 2010 at Government College University, Lahore

14. Mr. Ali Raza, Assistant Director (STI) attended a two day interactive workshop on “Introduction to Structural Equation Modeling using AMOS 16.0” from 23-24 April, 2010 at COMSATS Institute of Information Technology Lahore.

3.12. OTHER ACTIVITIES

- ***Invitation for PASTIC Free Membership***

The S&T information services provided by PASTIC are mainly for R&D organizations, higher education institutions, industry & business. During the last few years more than 370 organizations including R&D organizations, universities / professional and other colleges and private sector organizations have availed these facilities. In order to further facilitate its users and expand scope, PASTIC introduced membership scheme for this purpose. Initially a survey questionnaire was sent to regular user organizations to seek their willingness for becoming PASTIC members. Later on all public sector universities, R&D organizations, industry, SMEs, scientists, researchers, academicians and entrepreneurs were invited to become PASTIC members for having easy access to the information resources that PASTIC has in its store for them. A good response was received from individual users and user organizations for becoming members. A database was developed for maintaining record of this membership activity. PASTIC membership records of 617 individuals and organizations have been entered in this database.

- ***Delegation's visits to PASTIC***

1. 35 students of M.Phil and Ph.D from Department of Plant Sciences, Quaid-i-Azam University, Islamabad visited PASTIC on 10th December, 2009. They were briefed about services and activities of PASTIC
2. 16 Students of the Department of Plant Pathology, Arid Agricultural University, Rawalpindi visited PASTIC on 11th December, 2009. They were informed about literature search facilities available at PASTIC. Some students also availed the services.

3. A delegation of Department of Library and Information Science, University of Sargodha comprising 52 students and faculty members visited PASTIC on 9th January 2010. A presentation on PASTIC services and activities was arranged for this delegation. They were also taken around the facilities of PASTIC
4. A group of lecturers and teachers participating in a workshop on “Genetic Techniques” at Quaid-i-Azam University visited PASTIC on 6th August, 2009 to acquaint themselves about S&T information services of PASTIC
5. A team of NUST School of Electrical Engineering & Computer Science visited PASTIC to have an over view of services being rendered by PASTIC

- ***In-house Databases***

1. Development and updating of following in-house databases remained in progress:
2. Database of Scientific Societies of Pakistan
3. Database of S&T Organizations
4. Database of the Libraries of S&T and R&D organizations of Pakistan
5. Database on S&T Seminars and Conferences organized in Pakistan (2000 onward)
6. Database on completed and on going S&T projects in Pakistan (2000 onward)

- **Commonwealth Day**

PASTIC and its all sub-centres celebrated Commonwealth Day on 8th March, 2010 by organizing different activities at various universities, colleges and institutions in different cities of Pakistan for promotion of Science, Technology and Society Theme of Commonwealth Day for the year 2010.

- **World Science Day**

PASTIC National Centre and its all Sub-Centres celebrated World Science Day for Peace and Development (WSDPD) on November 10, 2009 by organizing different activities.

- **PASTIC Annual Report**

PASTIC Annual Report of 2007-08 printed whereas compilation of PASTIC Annual Report of 2008-09 was completed which is under printing process and coordinated in bringing out PSF quarterly Newsletter.

PHOTO GALLERY



Inaugural session of PASTIC workshop on Library Management at University of Sargodha,



Dr. Manzoor Hussain Soomro and Mr. Abid H.K. Sherwani during MoU signing ceremony between PASTIC and IRP



Group photo of the participants, organizers and resource persons of seminar on Information Security, 12-13 May, 2010



Dr. Manzoor H. Soomro, Director General, PASTIC in a meeting with officers of PASTIC Sub-Centre, Karachi



A view of the MoU signing ceremony between PASTIC and RCCI



Dr. Manzoor H. Soomro, Director General, PASTIC & Mr. Kashif Shabir, President RCCI Signing MoU, Engr. Abdul Rasheed, Advisor to Minister of S&T is also present



A participant receiving certificate from Dr. Manzoor H. Soomro, Chairman PSF



Ms. Nageen Ainnudin, Director PASTIC, Dr. A.Q. Mughal, VC, SAU and Dr. K.S. Memon, Director Projects during the PASTIC awareness seminar at SAU, Tandojam



Inaugural session of PASTIC workshop at University of Sargodha



Students of AAU visiting PASTIC Science Reference Library



Participants of PASTIC-FCCI seminar held in Faisalabad

NEWSPAPER CLIPPING

Pakistan OBSERVER

PASTIC moot

Credible information must for stable economy: Experts

STAFF REPORTER

ISLAMABAD—Speakers at a moot called upon the media organisations to set high standard of credible, authentic and correct dissemination of information in the era of globalization as today, "the economy depends a lot on fast and secure flow of information within and across the organizations."

These views were expressed by speakers at a two-day moot organised by Pakistan Scientific and Technological Information Centre (PASTIC), a subsidiary of Pakistan Science Foundation (PSF) here, "Information Security through the selection of right information technology management framework," on Wednesday at its auditorium. Lt Gen Muhammad Asghar, Rector, National University of Sciences and Technology, was chief guest at the inaugural session.

He said the integrity of the information is the most important issue in the era of globalization as today, the economy depends a lot on fast and secure flow of information within and across organizations, information security is an issue of vital importance. He said secured and trusted environment for storage and sharing of information enhances business performance, productivity and national security.

He further said the implementation of information security in an organization is more than establishing computer controls. It also demands ethical bearing of the employees of the organization and then trust set as well as all those who are involved in uploading the information on the web for its au-



ISLAMABAD: Rector National University for Science and Technology Lt Gen Muhammad Asghar addressing a seminar on 'Information Security' organized by PASTIC.

thenticity, he added. Chairman Pakistan Science Foundation Dr Manzoor Hussain Soomro in his welcome address highlighted the activities carried by Pakistan Science Foundation for the promotion of Science and Technology in the country. He highlighted the efforts taken by the Government of Pakistan by launching the Information Technology policy to

introduce governance through IT infrastructure development and use of computers, Internet and networks. The Government of Pakistan has also circulated Security Policy through Cabinet division. PASTIC as premier organization has taken an initiative to launch an awareness campaign on the topic of information security, he added. He said this seminar on

formation security is the first of its kind in Pakistan and was attended by the representatives from the different Scientific and Technological organizations across the country including Ministry of Science and Technology (MOST), Ministry of Environment, Government of Punjab, Government of Sindh and Government of Balochistan. The seminar was the first of its kind in Pakistan and was attended by the representatives from the different Scientific and Technological organizations across the country including Ministry of Science and Technology (MOST), Ministry of Environment, Government of Punjab, Government of Sindh and Government of Balochistan.

formation security is the first of its kind in Pakistan and was attended by the representatives from the different Scientific and Technological organizations across the country including Ministry of Science and Technology (MOST), Ministry of Environment, Government of Punjab, Government of Sindh and Government of Balochistan. The seminar was the first of its kind in Pakistan and was attended by the representatives from the different Scientific and Technological organizations across the country including Ministry of Science and Technology (MOST), Ministry of Environment, Government of Punjab, Government of Sindh and Government of Balochistan.

THE NEWS

Integrity of information important

Our correspondent Islamabad

The Pakistan Scientific and Technological Information Centre (PASTIC), a subsidiary organization of the Pakistan Science Foundation (PSF), here on Wednesday organized a two-day seminar on 'Information Security through the Selection of Right Information Technology Management Framework'.

Guest Rector, Lieutenant General (r) Muhammad Asghar said that in the era of globalization, integrity of the information is the most important issue as "economy depends a lot on fast and secure flow of information within and across organizations."

He said that a secure and trusted environment for storage and sharing of information greatly enhances business performance, productivity and national security. Whereas, insecure environment creates the potential for serious damage to government and corporations that can result in loss of trust by the consumers. He said that the implementation of information security is an organization is more than establishing computer controls and it also demands ethical bearing of the employees of the organization and those involved in uploading the information on the web for its authenticity.

The Nation most beautiful woman™

/Seminar on IT tomorrow

ISLAMABAD (AFP) - Pakistan Science and Technological Information Centre (PASTIC) is organizing a two days seminar 2010 on "Implementing Information Security through selection of right IT Management Framework" on May 12-13.

E-mail: mussalma@comsats.net.pk E-mail: afpnews@gmail.com

ABC CERTIFIED

گہماری و عقلماری و قدوسی و خبروت ❁ یہ چار عناصر ہوں تو بنتا ہے مسلمان

اعلیٰ صحافتی ولایت کا امین اور عظیم اخلاقی افکار کا پاسپان

AFP Akhbar Feroosh Publication

Daily
Mussalman
International/Islamabad.

روزنامہ
مسلمان
ایڈیٹر
اکا خان

اسلام آباد، لاہور اور کراچی سے بیک وقت شائع ہوتا ہے

جلد 26 جمرات 28 جمادی الاول 1431ھ 13 مئی 2010ء 28 مئی 2067ء 8 صفحات قیمت 7 روپے شمارہ 193

پاسنگ معلومات کی بروقت فراہمی کا بہترین ذریعہ ہے، محمد اصغر

انٹرنیشنل ٹیکنالوجی سے پیدا ہونے والے نئے ٹیکنالوجی کے بارے میں سیمینار کا انعقاد خوش آئند اقدام ہے

اسلام آباد (پ ر) پاکستان سائنس فاؤنڈیشن کے ذریعے اور سے پاکستان سائنسک اینڈ ٹیکنالوجی انٹرنیشنل سائنس فاؤنڈیشن نے "انٹرنیشنل ٹیکنالوجی بڑھانے والی رات انٹرنیشنل ٹیکنالوجی سیمینار فریم ورک" کے موضوع پر دو روزہ سیمینار کا اہتمام کیا ہے، اس سیمینار کا افتتاح کرتے ہوئے مہمان خصوصی جسٹس یونیورسٹی آف سائنس اینڈ ٹیکنالوجی کے ریٹائرڈ چیف جرنل محمد امین کیا۔ پاسنگ کی جانب سے انٹرنیشنل ٹیکنالوجی سے پیدا ہونے والے نئے ٹیکنالوجی کے بارے میں سیمینار کا انعقاد خوش آئند اقدام ہے۔ پاسنگ علقہ اقسام کی انٹرنیشنل سرورس مہیا کر رہا ہے اور یہ ادارہ سائنس دانوں کو تحقیق اور صنعت سے وابستہ افراد کی خدمت میں دن رات مصروف ہے، ہم سب اس بات سے آگاہ ہیں کہ انٹرنیشنل ٹیکنالوجی اور معلومات کی بروقت فراہمی ایک بہت بڑی طاقت ہے جس سے ترقی اور خوشحالی کے در سے 11 ہوتے ہیں معلوماتی خزانے میں کیا چیز شامل ہوتے ہیں۔

ABC CERTIFIED

پاکستان کے روزنامہ سربراہ

قاعدہ تصدیق شدہ شامت

THE DAILY JANG RAWALPINDI

روزنامہ جنگ راولپنڈی

LOCAL EDITION THURSDAY MAY 13, 2010

پہلی نمبر خلیل الرحمن

جلد 52 شمارت 28 جمادی الاول 1431ھ 13 مئی 2010ء پیر ماہ 2067 ب 132

پاکستان سائنس کا وطن بننے کے قریب ادارے پاکستان سائنس اکیڈمی کی بنیاد رکھیں گے۔ انگریزوں نے پاکستان کی سائنس کو ترقی دینے کے لیے ایک ادارہ قائم کیا ہے۔ اس ادارے کے تحت پاکستان سائنس اکیڈمی کی بنیاد رکھی جائے گی۔ اس ادارے کے تحت پاکستان سائنس اکیڈمی کی بنیاد رکھی جائے گی۔ اس ادارے کے تحت پاکستان سائنس اکیڈمی کی بنیاد رکھی جائے گی۔

7 Days

TECHNOLOGY Times

Price Rs.10 6 Pages ID-363 Vol. 1 No. 20

www.technologytimes.pk

MAY 27 24 2010

Integrity, secure flow of info vital

ITAT (ICT) in all areas of the country. The government has taken steps to ensure the security of information and to protect the flow of data. The government has also taken steps to ensure the security of information and to protect the flow of data. The government has also taken steps to ensure the security of information and to protect the flow of data.

ABC CERTIFIED

پاکستان کے روزنامہ سربراہ

قاعدہ تصدیق شدہ شامت

اسلام آباد روزنامہ کھبراہ

روزنامہ کھبراہ

DAILY Khabrain

روزنامہ کھبراہ

LOCAL EDITION THURSDAY MAY 13, 2010

پہلی نمبر خلیل الرحمن

جلد 19 شمارت 28 جمادی الاول 1431ھ 13 مئی 2010ء پیر ماہ 2067 ب 142



اسلام آباد میں روزنامہ کھبراہ کی نئی جگہ پر افتتاحی تقریب کے موقع پر خطاب کر رہے ہیں۔

Pakistan OBSERVER

Eyes & Ears of Pakistan

Widely read and trusted Daily

Friday, Jun 04, 2010 - Jamadi-us-Sani 20, 1431 AH

PASTIC, IRP unite to promote R&D culture

TARIQ KHATTAK

ISLAMABAD: Pakistan Scientific and Technological Information Centre (PASTIC) and Institute of Research Promotion (IRP), Lahore signed a memorandum of understanding to develop cooperation and collaboration for the promotion of research and development (R&D) culture.

Adopting previously applied successful strategy for the promotion of R&D culture, PASTIC has joined hands with IRP for sharing resources of both the organizations for promotion of science culture in Pakistan.

Besides innovative applied research will be collected from the universities and efforts would be made to pin point research based requirements of industry. Both the organizations will coordinate with other research organizations and will arrange trainings, workshops, conferences and various types of events to promote research

and development.

Dr. Mansoor H. Soomro, Chairman PASTIC and Abdul H. K. Sherwani, CEO IRP signed the public-private partnership for coordination and cooperation between government and non-government institutes in a ceremony. While addressing Dr. Soomro said that both the organization will use their resources to develop science culture. He furthered that liaison will be developed between chambers of commerce and industries, business bodies and R&D organizations of public and private sector to promote R&D.

"This MoU will prove a milestone in development of industrial research," he said. Sherwani ensured the cooperation in bridging the gap between industry and research institutes. Engineer Abdul Rasheed Khan, Advisor to Minister of Science and Technology appreciated efforts to strengthen R&D culture in Pakistan. He also assured the cooperation of the concerned Ministry.



ISLAMABAD: Chairman PASTIC Dr. Mansoor H. Soomro and CEO IRP Abdul H. K. Sherwani signing MoU. Engineer Abdul Rasheed Khan, Advisor to Minister of Science and Technology also present.

Daily Times

www.dailytimes.com.pk

Islamabad | Jamadi-us-Sani 20, 1431 Friday, June 4, 2010

MoU for research and development

ISLAMABAD: Pakistan Scientific and Technological Information Centre (PASTIC) and Islamabad and Institute of Research Promotion (IRP) signed a Memorandum of Understanding (MoU) to develop cooperation for the promotion of scientific research and development (R&D) culture in the country. PASTIC, a subsidiary of Pakistan Science Foundation (PSF), is a premier organisation in the field of S&T information handling and dissemination services. It has served the nation for more than fifty years to meet the ever-growing scientific and technological information needs of scientific community for R&D. STAFF REPORT

DAWN

Vol. LXIV No. 162 Islamabad, Jumadi-us-Sani 28, 1431 Saturday, June 12, 2010 22 PAGES

PSF, RCCI sign MoU

ISLAMABAD, June 11: The Pakistan Science Foundation (PSF) and Rawalpindi Chamber of Commerce and Industry (RCCI) on Friday signed a memorandum of understanding to promote collaboration in research and development.

PSF Chairman Dr Manzoor H. Soomro and RCCI President Kashif Shabbir signed the accord at a ceremony.

The MoU is aimed at bringing academia and industry together to conduct joint training programmes, workshops, seminars and industrial exhibitions.

The RCCI was established in 1952 as a venture to provide a platform to industrial and business community to analyse studies, reports, proposals and suggestions for members.—A Reporter

THE NEWS

Saturday
June 12, 2010

RCCI to promote R&D culture

ISLAMABAD: Pakistan Scientific and Technological Information Center (PASTIC) and Rawalpindi Chamber of Commerce & Industry (RCCI) on Friday signed a Memorandum of Understanding to develop cooperation and collaboration for the promotion of research and development (R&D) culture. PASTIC and RCCI have agreed to develop strong bridges to promote research culture and indigenous technologies by bringing together academia and industry. Both the organisations will arrange joint training programmes, workshops, seminars and industrial exhibitions by involving industry representatives and members of academia as well as R&D institutions. Dr. Manzoor H. Soomro, chairman, PASTIC, and Kashif Shabbir, president RCCI signed the MoU.—AFP

DAILY NAWA-I-WAQT
RAWALPINDI
ISLAMABAD

روزنامہ نواز وقت

راولپنڈی ایڈیٹر مجید نظامی اسلام آباد

راولپنڈی / اسلام آباد لاہور کراچی اور مانان سبیک وقت شائع ہوتا ہے

جلد	56
شمارہ	279
رجسٹرڈ نمبر	003 این پی آر
صفحات	16
قیمت	10 روپے
فون۔ راولپنڈی	2202641-44 اسلام آباد 5562676-77
فون۔ لاہور	3592222-007
پوسٹل	2067
ایسٹ	12 جون 2010
ایڈیشن	30

جدید ریسرچ سے انڈسٹری کی گروتھ میں اضافہ ہو گا: رشید خان

راولپنڈی (نمائندہ خصوصی) انڈسٹری آف پاکستان ایگزیکٹو کونسل کے وزیر کے مشیر محمد رشید خان نے کہا کہ انڈسٹری کی تازہ ایکسٹینشن چاہئے۔ ہمیں نئے دور کے تقاضوں کو اختیار کرنا ہے اور اپنی رفتار کو بڑھانے کے لیے نئے ٹیکنالوجی اور آلات کی خریداری کی ضرورت ہے۔ وہ گزشتہ روز PASTIE اور راولپنڈی چیمبر کے مابین باہمی مشاورت (سولہ ایقیرہ 8) کی یادداشت پر دستخط کرنے کی تقریب میں شامل تھے۔ مشیر برائے وزیر سائنس اینڈ ٹیکنالوجی نے صدر کاشف شہیر کو حکومت کی جانب سے ہر ممکن تعاون کی یقین دہانی کرائی۔

ہفت روزہ رشید خان 8

THE DAILY JANG RAWALPINDI

روزنامہ جنگ راولپنڈی

راولپنڈی ایڈیٹر مجید نظامی اسلام آباد

راولپنڈی / اسلام آباد لاہور کراچی اور مانان سبیک وقت شائع ہوتا ہے

جلد	52
شمارہ	162
رجسٹرڈ نمبر	003 این پی آر
صفحات	16
قیمت	10 روپے
فون۔ راولپنڈی	2202641-44 اسلام آباد 5562676-77
فون۔ لاہور	3592222-007
پوسٹل	2067
ایسٹ	12 جون 2010
ایڈیشن	30

ریسرچ کے حوالے سے لوگوں میں آگاہی اشد ضروری ہے

ملک کو تیار رقی کے بنانے کے لیے تحقیق و تجربہ کی ضرورت ہے۔ ہمیں نئے ٹیکنالوجی اور آلات کی خریداری کی ضرورت ہے۔ وہ گزشتہ روز PASTIE اور راولپنڈی چیمبر کے مابین باہمی مشاورت (سولہ ایقیرہ 8) کی یادداشت پر دستخط کرنے کی تقریب میں شامل تھے۔ مشیر برائے وزیر سائنس اینڈ ٹیکنالوجی نے صدر کاشف شہیر کو حکومت کی جانب سے ہر ممکن تعاون کی یقین دہانی کرائی۔

راولپنڈی (پبلک نیوز) انڈسٹری آف پاکستان ایگزیکٹو کونسل کے وزیر کے مشیر محمد رشید خان نے کہا کہ انڈسٹری کی تازہ ایکسٹینشن چاہئے۔ ہمیں نئے دور کے تقاضوں کو اختیار کرنا ہے اور اپنی رفتار کو بڑھانے کے لیے نئے ٹیکنالوجی اور آلات کی خریداری کی ضرورت ہے۔ وہ گزشتہ روز PASTIE اور راولپنڈی چیمبر کے مابین باہمی مشاورت (سولہ ایقیرہ 8) کی یادداشت پر دستخط کرنے کی تقریب میں شامل تھے۔ مشیر برائے وزیر سائنس اینڈ ٹیکنالوجی نے صدر کاشف شہیر کو حکومت کی جانب سے ہر ممکن تعاون کی یقین دہانی کرائی۔

DAILY NAWA-I-WAQT
RAWALPINDI
ISLAMABAD

روزنامہ نوائے وقت

راولپنڈی اسلام آباد

جلد	56
شمارہ	271
رجسٹر نمبر	003 آر
تاریخ	16
قیمت	10 روپے
تلفون	222-007
ایف ایکس	441-200
ایم ایس ایم	222-007
ایم ایس ایم	222-007

صحتی تحقیق کے فروغ کیلئے پانک اور آئی آر پی میں تعاون کا معاہدہ

پانک اور آئی آر پی کے درمیان ایک معاہدہ طے کیا گیا ہے جس کے تحت پانک اور آئی آر پی کے درمیان صحتی تحقیق کے فروغ کے لیے تعاون کا معاہدہ طے کیا گیا ہے۔

65

پانک اور آئی آر پی کے درمیان ایک معاہدہ طے کیا گیا ہے جس کے تحت پانک اور آئی آر پی کے درمیان صحتی تحقیق کے فروغ کے لیے تعاون کا معاہدہ طے کیا گیا ہے۔

ABC CERTIFIED

پاکستان کے سب سے زیادہ پڑھنے والے روزنامے کی ماہیاری

THE DAILY JANG RAWALPINDI

روزنامہ جنگ راولپنڈی

بانی: میر طویل الرحمن

جلد 152

شمارہ 162

تاریخ: 12 جون 2010ء

قیمت: 10 روپے

تلفون: 222-007

ایف ایکس: 441-200

ایم ایس ایم: 222-007

ایم ایس ایم: 222-007

سرج کے حوالے سے لوگوں میں آگاہی اشد ضروری ہے

پاکستان کے سب سے زیادہ پڑھنے والے روزنامے کی ماہیاری

پانک اور آئی آر پی کے درمیان ایک معاہدہ طے کیا گیا ہے جس کے تحت پانک اور آئی آر پی کے درمیان صحتی تحقیق کے فروغ کے لیے تعاون کا معاہدہ طے کیا گیا ہے۔

PASTIC and RCICI ink MoU on R&D

ISLAMABAD: Pakistan Scientific and Technological Information Centre (PASTIC) and Islamabad and Rawalpindi Chamber of Commerce & Industry (RCICI) on Friday signed a Memorandum of Understanding (MoU) to develop cooperation and collaboration for the promotion of research and development (R&D) culture. PASTIC, a subsidiary of Pakistan Science Foundation (PSF) is a premier organisation in the field of S&T information handling and dissemination. **start expert**



LOCAL

<http://www.nawaiwaqt.com.pk>
 email: isb@nawaiwaqt.com.pk

سلسلہ اشاعت کے 70 سال

DAILY NAWA-I-WAQT
 RAWALPINDI
 ISLAMABAD

روزنامہ نوائے وقت

راولپنڈی اسلام آباد

راولپنڈی اسلام آباد اور راولپنڈی سبک دہشتہ شائع ہوتا ہے

شمارہ	رجسٹرڈ نمبر	صفحات	ہفت روزہ 2067 2010/30 بڑھانے والی 1431 12 جون 2010	جلد
279	این پی آر 003	16	قیمت 10 روپے	56

فون اسلام آباد: 77-5962676-444-2282641
 UAN 111-222-007

SATURDAY, 12 JUNE, 2010

جدید ریسرچ سے انڈسٹری کی
گرد و گھم میں اضافہ ہو گا: رشید خان

راولپنڈی (نامہ نگار خصوصی) انڈسٹری کی سائنس اینڈ ٹیکنالوجی کے وزیر کے مشیر محمد رشید خان نے کہا کہ انڈسٹری کی ہر ایک پینچین چاہیے۔ ہمیں سب سے دور کے ممالک کو اختیار کرنا ہے اور اپنی رفتار کو تیز کر کے ممالک پر قابو پانا ہے۔ ریسرچ کے حوالے سے لوگوں میں آگاہی کی اشد ضرورت ہے۔ وہ گزشتہ روز PASTIC اور راولپنڈی میجر کے مابین ہونے والی مشہور تقریب (صفحہ 10) پر

تقریب رشید خان 8

کی یادداشت پر حواہ کرنے کی تقریب میں شامل تھے۔ مشیر برائے وزیر سائنس اینڈ ٹیکنالوجی نے صدر کاشف شہیر کو حکومت کی جانب سے ہر تکتہ تھکان کی یقین دہانی کرائی۔

**ORGANISATION
&
ADMINISTRATION**

CHAPTER-2

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:

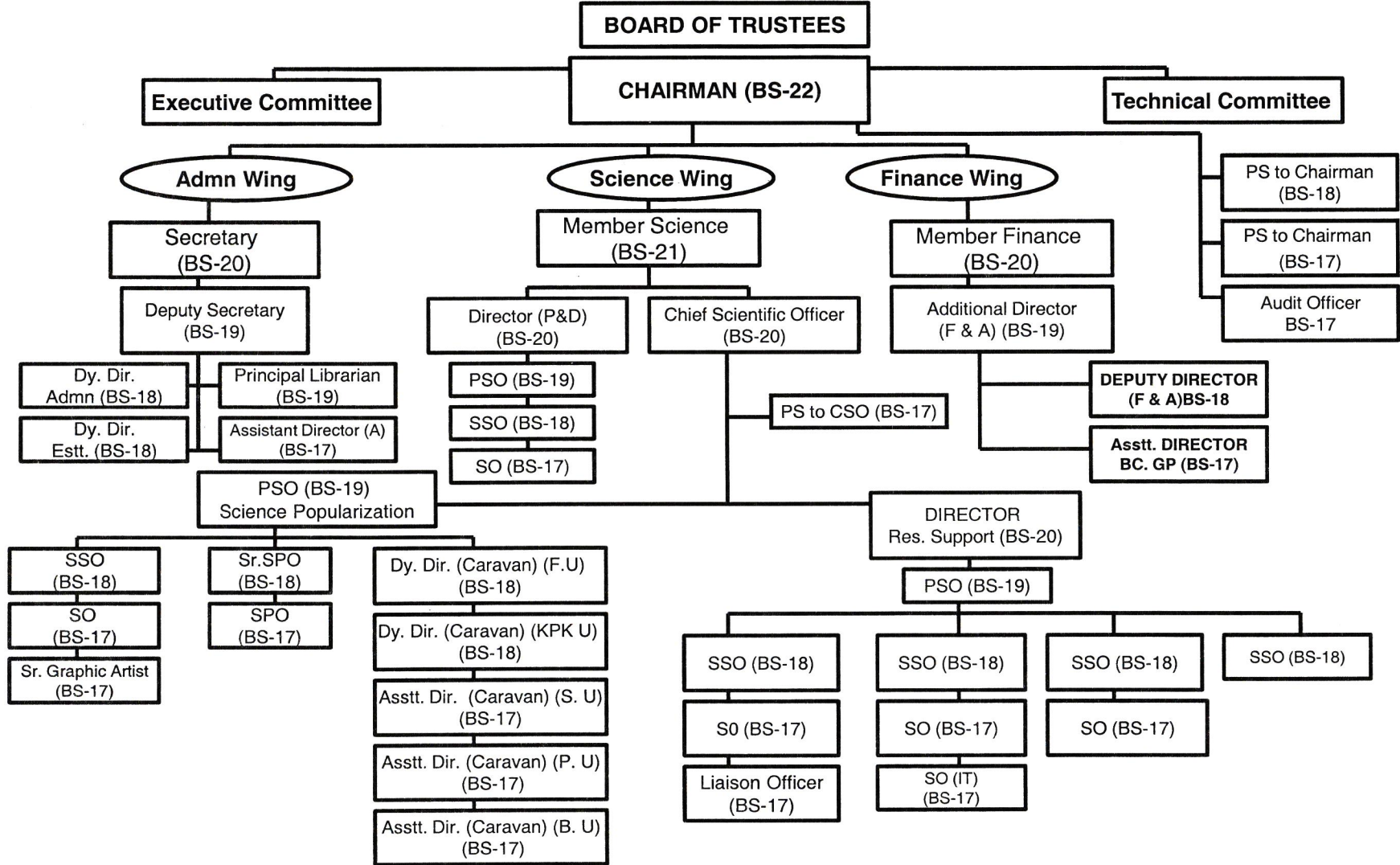
PAKISTAN SCIENCE FOUNDATION (PSF)

Sanctioned strength of PSF for the fiscal year 2009-2010

Sr. No	Name of Post	BS	Sanctioned strength
1.	Chairman	22	1
2.	Member Science	21	1
3.	Member Finance	20	1
4.	Secretary	21	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	3
10.	Deputy Secretary	19	1
11.	Pr. Librarian	19	1
12.	Sr. Scientific Officer	18	5
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	2
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	3
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.	Sr. Science Assistant (Caravan)	16	5
35.	Sr. Diver-Cum-Mechanic	16	2
36.	Sr. Planetarium Assistant	16	2
	Sub Total:-		64
37.	Stenographer	15	6
38.	Science Assistant (Caravan)	14	14
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
44.	Photographer	14	1
45.	Stenotypist	12	5
46.	Calligrapher	11	1
47.	Planetarium Assistant	11	7
48.	Driver-Cum-Mechanic	11	7
49.	Sr. Electrician	11	1
50.	Sr. Carpenter	11	1
51.	UDC	9	5
52.	LDC/Typist	7	11
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.	Chowkidar	1/2/3	4
59.	Caravan Attendant	1/2/3	9
60.	Security Guard	1/2/3/4	11
61.	Sanitary Worker	1/2/3	4
	Sub Total:-		138
	G. Total:-		202

**PAKISTAN SCIENCE FOUNDATION
ORGANIZATIONAL CHART
2009-10**



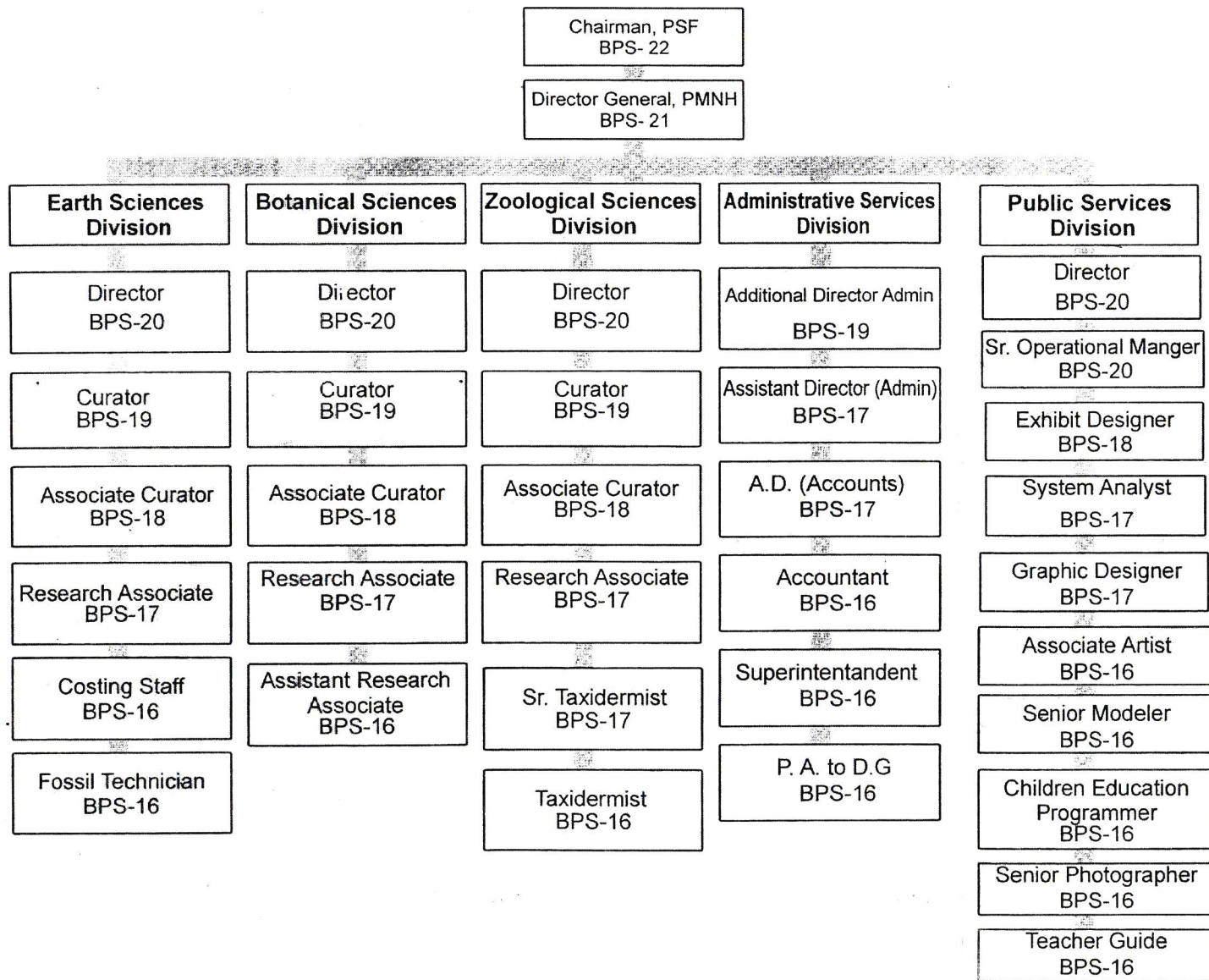
PAKISTAN MUSEUM OF NATURAL HISTORY (PMNH)

SANCTIONED STRENGTH FOR THE FISCAL YEAR 2009-10 (AS PER NIS)

<i>Sr. No</i>	<i>Name of Post</i>	<i>BPS</i>	<i>No. of Post</i>
1.	<i>Director General</i>	21	1
2.	<i>Director</i>	20	4
3.	<i>Sr. Operational Manager</i>	20	1
4.	<i>Curator</i>	19	7
5.	<i>Additional Director (Admin)</i>	19	1
6.	<i>Associate Curator</i>	18	8
7.	<i>Exhibit Designer</i>	18	1
8.	<i>Assistant Director (Admin)</i>	17	1
9.	<i>Assistant director (Accounts)</i>	17	1
10.	<i>Research Associate</i>	17	16
11.	<i>Graphic Designer</i>	17	1
12.	<i>Sr. Taxidermist</i>	17	1
13.	<i>System Analyst</i>	17	1
14.	<i>Assistant Research Associate</i>	16	2
15.	<i>P.A. to the Director General</i>	16	1
16.	<i>Associate Artist</i>	16	1
17.	<i>Teacher Guide</i>	16	1
18.	<i>Children Education Programmer</i>	16	1
19.	<i>Sr. Photographer</i>	16	1
20.	<i>Accountant</i>	16	2
21.	<i>Assistant Librarian</i>	16	1
22.	<i>Taxidermist</i>	16	1
23.	<i>Superintendent</i>	16	1
24.	<i>Casting Staff</i>	16	1
25.	<i>Fossil Technician</i>	16	1
26.	<i>Sr. Modeler</i>	16	1
	<i>TOTAL</i>		59
	<i>Supporting Staff</i>		77
	<i>GRAND TOTAL</i>		136

PAKISTAN MUSEUM OF NATURAL HISTORY

Organizational Chart



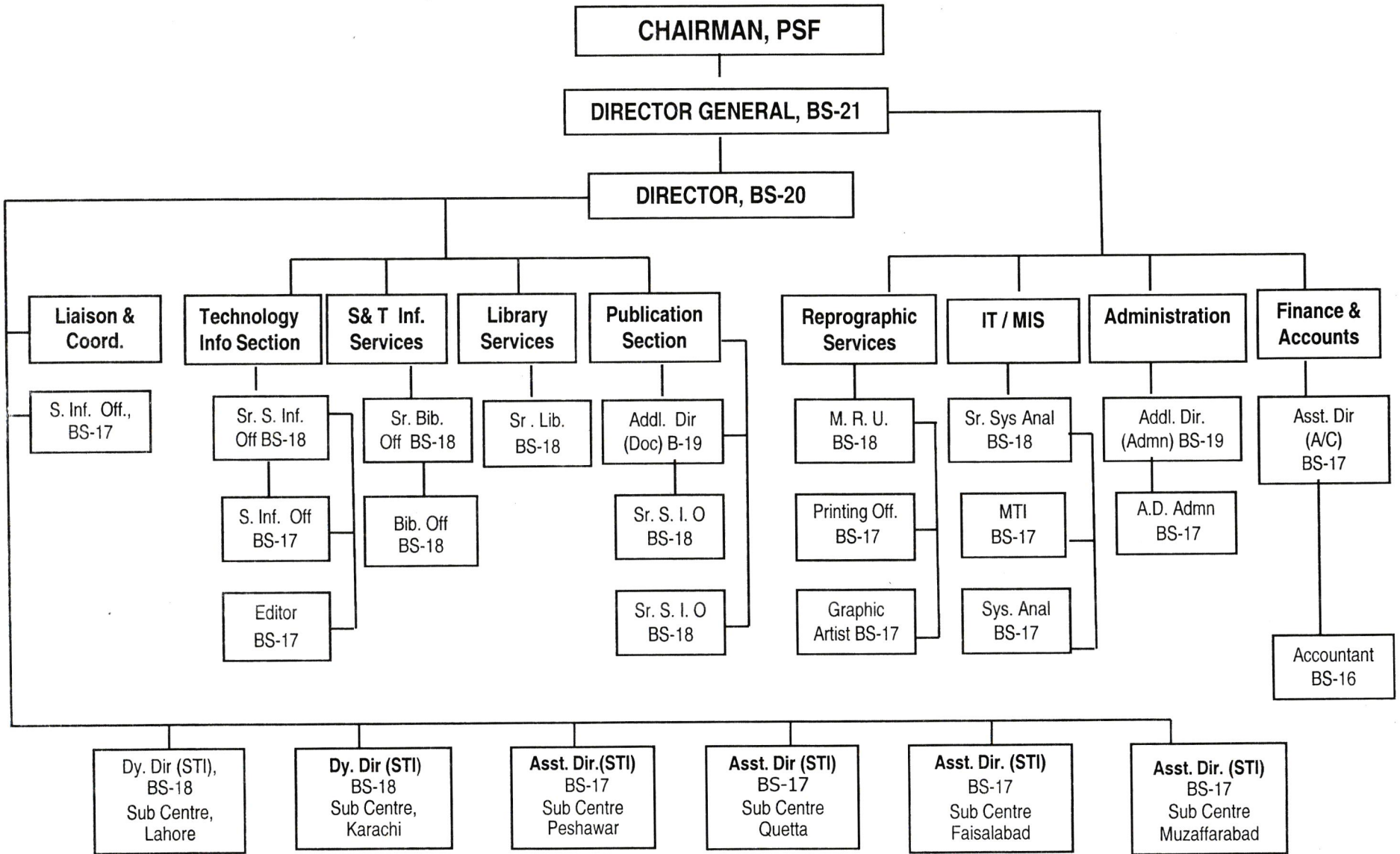
**PAKISTAN SCIENTIFIC & TECHNOLOGICAL INFORMATION CENTRE,
(PASTIC) ISLAMABAD**

SANCTIONED STRENGTH FOR THE FISCAL YEAR 2009-10 (AS PER NIS)

S. No.	➤ Name of Post	BS	No. of Posts
1.	Director General	21	1
2.	Director	20	1
3.	Additional Director (Admn.)	19	1
4.	Deputy Director (Doc)	19	1
5.	Deputy Director (STI)	18	2
6.	Sr. Bibliographic Officer	18	1
7.	Manager Reprographic Unit	18	1
8.	Sr. System Analyst.	18	1
9.	Sr. Librarian	18	1
10.	Sr. Scientific Information Officer	18	4
11.	Assistant Director (Accounts)	17	1
12.	Assistant Director (STI)	17	4
13.	Scientific Information Officer	17	5
14.	Bibliographic Officer	17	1
15.	System Analyst	17	1
16.	Web Manager	17	1
17.	Manager Technology Information	17	1
18.	Printing Officer	17	1
19.	<u>Graphic Artist</u>	17	1
20.	<u>Assistant Director (Admn)</u>	17	1
21.	Technology Information Officer (Marketing)	17	1
22.	<u>Editor</u>	17	1
23.	<u>Assistant Accounts Officer</u>	16	1

24.	PA to Director General.	16	1
25.	Superintendent (Reprographic Unit)	16	1
26.	Superintendent (Admn)	16	1
27.	Asstt. Scientific Information Officer	16	4
28.	Asstt. Documentation Officer.	16	1
29.	Asstt: Programmer.	16	2
30.	Asstt. Web Manager	16	1
31.	Asstt. Manager Reprographic Unit	16	1
32.	Asstt. Printing Officer	16	3
33.	Accountant	16	1
		Total:	50
	Supporting Staff		113
	Grand Total		163

ORGANIZATIONAL CHART OF PASTIC 2009-10



AUDITOR'S REPORT

CHAPTER – 3

PAKISTAN SCIENCE FOUNDATION FINANCIAL STATEMENTS JUNE 30, 2010

Amir Alam Khan & Co.
Chartered Accountants

55/1, Bank Road, Rawalpindi

Tele: 5563483, 5563256

Fax : 5517358

E-mail: aakco@brain.net.pk

AUDITORS' REPORT TO THE MEMBERS

We have audited the annexed balance sheet of PAKISTAN SCIENCE FOUNDATION as at June 30, 2010 and the related income and expenditure account and cash flow statement together with notes forming part thereof (here-in-after 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 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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amount and disclosures in the financial statements. An audit also includes assessing the accounting policies used and 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 after due verification, we report that;

In our opinion and to the best of our information and according to the explanation given to us, these financial statements give the information as required and present fairly in all material respects the financial position of the PAKISTAN SCIENCE FOUNDATION as at June 30, 2010 and of its surplus and cash flow for the year then ended in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi, 30 - 12 - 10

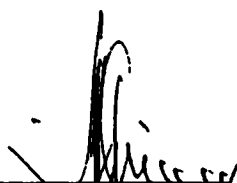

(Amir Alam Khan & Co.)
Chartered Accountants
Habib Fakhruddin FCA
RAWALPINDI

**PAKISTAN SCIENCE FOUNDATION
BALANCE SHEET AS AT JUNE 30, 2010**

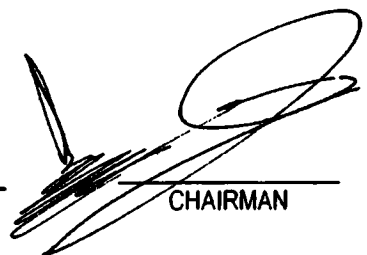
	Note	2010 (Rupees)	2009 (Rupees)
FUNDS			
General fund	3	25,873,518	24,449,007
Development fund	4	14,156,366	15,346,885
Fair fund	5	258,763	247,500
ECO science foundation fund		1,171	1,147
Miscellaneous funds	6	734,231	916,428
		41,024,049	40,960,967
NON-CURRENT LIABILITIES			
Research support grant - Contra	9	119,494,272	98,261,442
Long term security deposits		27,300	27,300
		119,521,572	98,288,742
		160,545,621	139,249,709
NON-CURRENT ASSETS			
Property, plant and equipment	7	36,629,610	36,610,935
Capital work in progress - PSF software		750,000	525,000
Long term security deposits	8	1,917,195	1,917,195
Research projects in progress - Contra	9	119,494,272	98,261,442
		158,791,077	137,314,572
CURRENT ASSETS			
Advances	10	410,477	425,391
Cash and bank balances	11	1,344,067	1,509,746
		1,754,544	1,935,137
		160,545,621	139,249,709

The annexed notes from 1 to 16 form an integral part of these financial statements.

Islamabad, 30-12-10



TRUSTEE



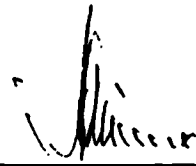
CHAIRMAN

**PAKISTAN SCIENCE FOUNDATION
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2010**


	Note	2010 (Rupees)	2009 (Rupees)
INCOME			
GRANT FROM FEDERAL GOVERNMENT		109,000,000	91,675,000
EXPENDITURES			
STATUTORY SCIENTIFIC FUNCTIONS	12	(52,349,797)	(40,009,699)
ADMINISTRATIVE EXPENSES	13	(55,225,692)	(52,049,085)
PRIOR YEAR ADJUSTMENTS	14	-	12,850
		(107,575,489)	(92,045,934)
SURPLUS / (DEFICIT) TRANSFERRED TO GENERAL FUND		1,424,511	(370,934)

The annexed notes from 1 to 16 form an integral part of these financial statements.

Islamabad, 30 - 12 - 10



TRUSTEE



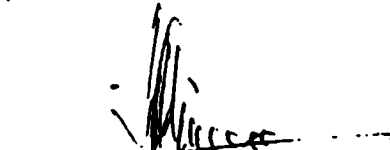
CHAIRMAN

**PAKISTAN SCIENCE FOUNDATION
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2010**


	2010 (Rupees)	2009 (Rupees)
CASH FLOWS FROM OPERATING ACTIVITIES		
Deficit for the year	1,424,511	(370,934)
Adjustments for non cash charges:		
Depreciation	5,101,446	4,743,767
Surplus/(deficit) before working capital changes	6,525,957	4,372,833
Working capital changes		
(Increase)/ Decrease in current assets:		
Advances	14,914	(61,822)
Increase/ (Decrease) in current liabilities:		
Net working capital charges	14,914	(61,822)
Net cash generated from operating activities	6,540,871	4,311,011
CASH FLOWS FROM INVESTING ACTIVITIES		
Property, plant and equipment	(5,120,121)	(1,600,321)
Capital work in progress	(225,000)	(525,000)
Long term security deposits	-	(3,000)
Net cash used in investing activities	(5,345,121)	(2,128,321)
CASH FLOWS FROM FINANCING ACTIVITIES		
Development fund	(1,190,519)	(2,176,446)
Fair fund	11,263	10,773
ECO science foundation fund	24	1,147
Miscellaneous funds	(182,197)	(277,959)
Net cash from financing activities	(1,361,429)	(2,442,485)
NET DECREASE IN CASH AND CASH EQUIVALENTS	(165,679)	(259,795)
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	1,509,746	1,769,541
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	1,344,067	1,509,746

The annexed notes from 1 to 16 form an integral part of these financial statements.

Islamabad. 30-12-10



TRUSTEE



CHAIRMAN

PAKISTAN SCIENCE FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2010

1. THE FOUNDATION AND ITS OPERATIONS

Pakistan Science Foundation is a statutory organization established under Pakistan Science Foundation Act, 1973 on February 02, 1973. The main objects are to promote and finance scientific activities having a bearing on the socio-economic needs of the country.

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

These financial statements have been prepared under the historical cost convention.

2.2 BASIS OF PREPARATION

These financial statements have been prepared under cash receipt and payment method of accounting.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost less accumulated depreciation except leasehold land, which is stated at cost. Depreciation is charged on reducing balance method of written down values depending upon the class of property, plant and equipment. Full year's depreciation is charged on additions while no depreciation is charged on deletions during the year.

Normal repairs and maintenance are charged to income as and when incurred. Major renewals and improvements are capitalized. Gain on disposal of property, plant and equipment is taken to income and expenditure account.

	2010 (Rupees)	2009 (Rupees)
GENERAL FUND		
Opening balance	24,449,007	24,819,941
Surplus / deficit for the year	<u>1,424,511</u>	<u>(370,934)</u>
	<u><u>25,873,518</u></u>	<u><u>24,449,007</u></u>

		2010 (Rupees)	2009 (Rupees)
4. DEVELOPMENT FUND			
Opening balance		15,346,885	17,523,331
Grants received during the year	4.1	<u>4,131,000</u>	<u>2,651,373</u>
		19,477,885	20,174,704
Expenditure incurred during the year	4.2	<u>(5,321,519)</u>	<u>(4,827,819)</u>
		<u><u>14,156,366</u></u>	<u><u>15,346,885</u></u>

REPRESENTED BY:

Property, plant and equipment		13,204,157	14,619,683
Capital work in progress - PSF software		750,000	525,000
Cash at banks		288,233	289,313
Prior year adjustment		<u>(86,024)</u>	<u>(87,111)</u>
		<u><u>14,156,366</u></u>	<u><u>15,346,885</u></u>

4.1 GRANTS RECEIVED DURING THE YEAR

Participation of scientists and technologists in conferences		1,810,000	643,000
Automation of PSF research support program and other activities		<u>2,321,000</u>	<u>2,008,373</u>
		<u><u>4,131,000</u></u>	<u><u>2,651,373</u></u>

4.2 EXPENDITURE INCURRED DURING THE YEAR

Participation of scientists and technologists in conferences

TA / DA and evaluation fee		772,861	-
Registration fee		193,522	-
Postage and stationery		38,819	26,660
Depreciation	7.1	2,686,676	2,701,446
Staff salary		407,097	540,000
Miscellaneous		6,400	39,340
Living expenses		391,301	-
Advertisement		-	37,000
		<u>4,496,676</u>	<u>3,344,446</u>

Automation of PSF research support program and other activities

Postage and stationery		27,830	-
Staff salary		592,492	692,452
Miscellaneous		204,521	692,421
Repairs		-	98,500
		<u>824,843</u>	<u>1,483,373</u>
		<u><u>5,321,519</u></u>	<u><u>4,827,819</u></u>

	2010 (Rupees)	2009 (Rupees)
5. FAIR FUND		
Opening balance	247,500	236,727
Profit received during the year	11,263	10,773
	<u>258,763</u>	<u>247,500</u>
REPRESENTED BY:		
Cash at bank	<u>258,763</u>	<u>247,500</u>
6. MISCELLANEOUS FUNDS		
Opening balance		
Endowment	233,638	193,012
UNESCO	682,790	1,001,375
	916,428	1,194,387
Grants received during the year		
Endowment	78,598	40,626
UNESCO	1,440,000	-
	<u>1,518,598</u>	<u>40,626</u>
Expenditure incurred during the year		
Endowment	(33,049)	-
UNESCO	(1,667,746)	(318,585)
	(1,700,795)	(318,585)
Closing balance		
Endowment	279,187	233,638
UNESCO	455,044	682,790
	<u>734,231</u>	<u>916,428</u>
REPRESENTED BY:		
Cash at bank	<u>734,231</u>	<u>916,428</u>

AA

PROPERTY, PLANT AND EQUIPMENT

PARTICULARS	C O S T			R A T E	D E P R E C I A T I O N				W D V
	AS AT	A D D I T I O N S	AS AT		AS AT	A D J U S T M E N T	F O R T H E Y E A R	AS AT	AS AT
	J U L Y 0 1, 2 0 0 9		J U N E 3 0, 2 0 1 0		J U L Y 0 1, 2 0 0 9			J U N E 3 0, 2 0 1 0	J U N E 3 0, 2 0 1 0
Land - Leasehold	3,713,418	-	3,713,418						3,713,418
Building	19,484,540	-	19,484,540	5%	9,982,417	-	475,106	10,457,523	9,027,017
Motor vehicles	7,615,246	2,620,206	10,235,452	20%	4,630,243	-	1,121,042	5,751,285	4,484,167
Office equipment	4,856,242	651,770	5,508,012	15%	3,738,472	-	265,431	4,003,903	1,504,109
Science equipment	6,558,040	-	6,558,040	15%	3,803,871	-	413,125	4,216,996	2,341,044
Furniture and fixture	2,423,089	488,141	2,911,230	6%	1,406,621	-	90,277	1,496,898	1,414,332
Air conditioners	194,974	-	194,974	20%	193,434	-	308	193,742	1,232
Library books and films	1,705,961	88,854	1,794,815	5%	805,200	-	49,481	854,681	940,134
2010 - Rupees	46,551,510	3,848,971	50,400,481		24,560,258	-	2,414,770	26,975,028	23,425,453
2009 - Rupees	44,951,189	1,600,321	46,551,510		22,517,937	-	2,042,321	24,560,258	21,991,252
DEVELOPMENT PROJECTS									
Motor vehicles	6,494,293	-	6,494,293	20%	4,936,139	-	311,631	5,247,770	1,246,523
Office equipments	24,950,380	-	24,950,380	15%	12,310,113	-	1,896,040	14,206,153	10,744,227
Computer equipments	1,300,068	1,271,150	2,571,218	33%	1,173,214	-	461,341	1,634,555	936,663
Furniture and fixtures	381,907	-	381,907	6%	87,499	-	17,664	105,163	276,744
2010 - Rupees	33,126,648	1,271,150	34,397,798		18,506,965	-	2,686,676	21,193,641	13,204,157
2009 - Rupees	33,126,648	-	33,126,648		15,805,519	-	2,701,446	18,506,965	14,619,683
2010 - Rupees Consolidated	79,678,158	5,120,121	84,798,279		43,067,223	-	5,101,446	48,168,669	36,629,610
2009 - Rupees Consolidated	78,077,837	1,600,321	79,678,158		38,323,456	-	4,743,767	43,067,223	36,610,935

7.1 DEPRECIATION ALLOCATION

	2010 (Rupees)	2009 (Rupees)
Development projects	2,686,676	2,701,446
Administrative expenses	2,414,770	2,042,321
	<u>5,101,446</u>	<u>4,743,767</u>

8. LONG TERM SECURITY DEPOSITS

	2010 (Rupees)	2009 (Rupees)
Electricity	1,472,195	1,472,195
Gas	145,000	145,000
CMH Rawalpindi	300,000	300,000
	<u>1,917,195</u>	<u>1,917,195</u>

		2010 (Rupees)	2009 (Rupees)
9. RESEARCH PROJECTS IN PROGRESS			
Opening balance		98,261,442	88,399,170
Add: Disbursements during the year	9.1	<u>30,173,143</u>	<u>20,640,378</u>
		128,434,585	109,039,548
Less: Projects completed during the year	9.2	<u>(6,790,582)</u>	<u>(9,175,728)</u>
Expenses for projects	9.3	<u>(2,149,731)</u>	<u>(1,602,378)</u>
		<u>(8,940,313)</u>	<u>(10,778,106)</u>
		<u>119,494,272</u>	<u>98,261,442</u>
9.1 DISBURSEMENTS DURING THE YEAR			
Institutional support		887,000	699,752
Biotech sciences		590,271	797,839
Evaluation fee		408,600	445,300
Physical sciences		3,098,180	2,487,583
Chemical sciences		1,947,928	1,361,553
Biological sciences		6,438,443	6,333,584
Earth sciences		1,087,484	828,127
Environmental sciences		2,385,655	1,251,017
Engineering sciences		592,711	1,088,378
Agricultural sciences		3,212,284	580,616
Medical sciences		7,223,456	3,851,692
Board/Committee meetings		854,131	457,326
Utilization of results of research and transfer of technology and pilot plant study		1,447,000	457,611
		<u>30,173,143</u>	<u>20,640,378</u>
9.2 PROJECTS COMPLETED DURING THE YEAR			
Biotech sciences		-	3,579,134
Agricultural sciences		1,939,325	1,960,775
Chemical sciences		2,186,906	-
Engineering		-	286,137
Environmental sciences		390,739	-
Physical sciences		2,202,122	-
Biological sciences		71,490	2,610,269
Utilization of results of research and transfer of technology and pilot plant study		-	739,413
		<u>6,790,582</u>	<u>9,175,728</u>
9.3 EXPENSES FOR PROJECTS			
Institutional support		887,000	699,752
Board/committee meetings		854,131	457,326
Evaluation fee		408,600	445,300
		<u>2,149,731</u>	<u>1,602,378</u>
10. ADVANCES			
Advances - staff			
For vehicles		407,317	417,293
For cycle		3,160	8,098
		<u>410,477</u>	<u>425,391</u>

		2010 (Rupees)	2009 (Rupees)
11. CASH AND BANK BALANCES			
Cash in hand		34,368	28,057
Cash at bank			
Current account		315,534	316,614
Deposit account		994,165	1,165,075
		<u>1,344,067</u>	<u>1,509,746</u>
12. STATUTORY SCIENTIFIC FUNCTIONS			
Research support grant	9.1	30,173,143	20,640,378
Scientific societies and professional bodies		1,710,000	2,661,216
Scientific conferences, meetings and seminars		1,260,000	630,185
Operation of science caravan		12,108,206	10,656,728
Science promotion activities		2,820,830	3,484,272
Science fair		2,416,653	-
Awards, prizes and fellowship		467,050	306,000
Innovations & Inventions		1,000,000	-
Special scientific survey & collection of statistics		50,000	-
Subscription to international organization and UNESCO coupons		-	96,008
Science centre herbaria planteria		343,915	1,534,912
		<u>52,349,797</u>	<u>40,009,699</u>
13. ADMINISTRATIVE EXPENSES			
Salaries and other benefits		38,319,598	36,464,062
Traveling		493,923	139,859
House rent facility		8,108,119	7,577,359
Ground rent to CDA		126,426	126,426
Electricity, gas and water		675,335	1,005,399
Communication		1,643,748	1,166,364
Printing and stationery		516,482	299,083
Vehicle running and maintenance		1,234,836	1,431,606
Newspapers and magazines		89,543	79,395
Liveries and uniforms		32,707	55,181
Entertainment		130,909	116,416
Repair and maintenance		556,276	1,054,431
Audit fee		35,000	20,000
Staff welfare fund		300,000	300,000
Advertisement and publicity		416,495	72,109
Miscellaneous		131,525	99,074
Depreciation	7.1	2,414,770	2,042,321
		<u>55,225,692</u>	<u>52,049,085</u>

**PAKISTAN MUSEUM OF NATURAL HISTORY
FINANCIAL STATEMENTS
JUNE 30, 2010**

**Amir Alam Khan & Co.
Chartered Accountants
55/1, Bank Road, Rawalpindi
Tele: 5563483, 5563256
Fax : 5517358
E-mail: aakco@brain.net.pk**

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the annexed balance sheet of Non-development account of Pakistan Museum of Natural History (PMNH) as at June 30, 2010, the related income and expenditure account and cash flow statement together with the notes forming part thereof, (here-in-after 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 include 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 foundation has not charged depreciation on property, plant and equipment which is a contravention with the criteria 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 in all material respect the financial position of the Non-development account of Pakistan Museum of Natural History (PMNH) as at June 30, 2010 and of its surplus and cash flow for the year then ended in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi, 30 - 12 - 10

Amir Alam Khan
(Amir Alam Khan & Co.)
Chartered Accountants
Habibullah FCA *AK*

**PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
BALANCE SHEET AS AT JUNE 30, 2010**

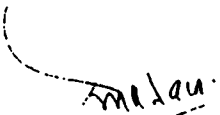
	Note	2010 (Rupees)	2009 (Rupees)
FUNDS			
General fund	3	<u>13,030,128</u>	<u>8,592,469</u>
NON-CURRENT ASSETS			
Property, plant and equipment	4	<u>12,775,780</u>	<u>8,338,121</u>
Long term deposits - PIMS		<u>250,000</u>	<u>250,000</u>
		<u>13,025,780</u>	<u>8,588,121</u>
CURRENT ASSETS			
Advances	5	<u>4,348</u>	<u>4,348</u>
		<u>13,030,128</u>	<u>8,592,469</u>

The annexed notes from 1 to 8 form an integral part of these financial statements.

Islamabad. 30-12-10



ASSISTANT DIRECTOR
Assistant Director (Accounts)
Pakistan Museum of Natural History
Islamabad



DIRECTOR GENERAL
Director General
Pakistan Museum of Natural History
Garden Avenue Islamabad.

**PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2010**

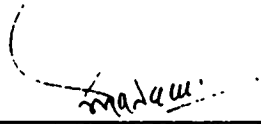
	Note	2010 (Rupees)	2009 (Rupees)
INCOME			
GRANT FROM FEDERAL GOVERNMENT		57,232,000	50,550,000
EXPENDITURE	6	(52,794,341)	(50,150,150)
SURPLUS TRANSFERRED TO GENERAL FUND		4,437,659	399,850

The annexed notes from 1 to 8 form an integral part of these financial statements.

Islamabad, 0 - 12 - 10



ASSISTANT DIRECTOR
Account Director (Accounts)
Pakistan Museum of Natural History
Islamabad



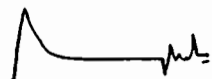
DIRECTOR GENERAL
Director General
Pakistan Museum of Natural History
Garden Avenue Islamabad.

**PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2010**

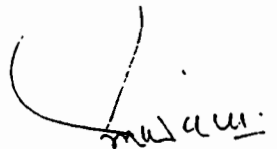
	2010 (Rupees)	2009 (Rupees)
CASH FLOWS FROM OPERATING ACTIVITIES		
Surplus/(deficit) before working capital changes	4,437,659	399,850
Working capital changes		
(Increase)/ Decrease in current assets:		
Advances		14,000
Increase/ (Decrease) in current liabilities:		
Net working capital charges	<u>-</u>	<u>14,000</u>
Net cash generated from operating activities	<u>4,437,659</u>	<u>413,850</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Property, plant and equipment	<u>(4,437,659)</u>	<u>(383,850)</u>
Net cash used in investing activities	<u>(4,437,659)</u>	<u>(383,850)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
General fund	<u>30,000</u>	<u>(30,000)</u>
Net cash (used in)/ from financing activities	<u>30,000</u>	<u>(30,000)</u>
NET INCREASE IN CASH AND CASH EQUIVALENTS	30,000	-
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	-	-
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	<u>30,000</u>	<u>-</u>

The annexed notes from 1 to 8 form an integral part of these financial statements.

Islamabad, 30-12-10



ASSISTANT DIRECTOR
Assistant Director (Accounts)
Pakistan Museum of Natural History
Islamabad



DIRECTOR GENERAL
Director General
Pakistan Museum of Natural History
Garden Avenue Islamabad.

PAKISTAN MUSEUM OF NATURAL HISTORY
NON DEVELOPMENT ACCOUNT
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2010

1. BACKGROUND AND OBJECTIVE

Pakistan Museum of Natural History (PMNH) is a science center of Pakistan Science Foundation (PSF) established under Pakistan Science Foundation Act 1973, with an objective of promoting and financing scientific activities having a bearing on socio-economic needs of country. Main objective of PMNH is to establish a Museum of Natural History.

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

These financial statements have been prepared under the historical cost convention

2.2 BASIS OF PREPARATION

These financial statements have been prepared under cash receipt and payment method of accounting.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost. No depreciation is charged

	2010 (Rupees)	2009 (Rupees)
3. GENERAL FUND		
Opening balance	8,592,469	8,222,619
Transfer to government of Pakistan	-	(30,000)
Surplus for the year	4,437,659	399,850
	13,030,128	8,592,469
4. PROPERTY, PLANT AND EQUIPMENT		

PARTICULARS	C O S T			AS AT JUNE 30, 2010
	AS AT JULY 01, 2009	ADDITIONS	DELETIONS	
Land	1,050,000	-	-	1,050,000
Machinery	1,139,751	-	-	1,139,751
Motor vehicles	1,380,790	2,620,205	-	4,000,995
Furniture and fixture	1,304,249	182,609	-	1,486,858
Office laboratory equipments	2,800,486	1,585,759	-	4,386,245
Computer equipments	152,905	-	-	152,905
Books	484,940	49,086	-	534,026
Whales and elephant skeleton	25,000	-	-	25,000
2010 - Rupees	8,338,121	4,437,659	-	12,775,780
2009 - Rupees	7,954,271	1,036,414	652,564	8,338,121

	2010 (Rupees)	2009 (Rupees)
ADVANCES		
Recoverable advances	3,120	3,120
Advance for vehicle - (Receivable from UBL A/C # CD-70)	1,228	1,228
	<u>4,348</u>	<u>4,348</u>
EXPENDITURE		
Pay and allowances	28,123,862	23,215,502
Overtime allowance	90,400	52,233
Rent of residential accommodation	7,540,376	7,159,092
Medical expenses	2,520,096	2,435,079
CPF contribution	77,020	33,683
GLI contribution	59,274	57,547
Gratuity	86,790	34,200
Pension contribution	4,963,000	10,133,748
Leave encasement	299,125	117,294
Contingency of staff	-	212,450
Ground rent	6,050	6,050
Travelling expenses	111,491	104,260
Repair and maintenance	1,684,624	1,030,094
Communication	771,377	679,582
Printing and stationery	224,304	173,593
Consumable stores	213,045	242,934
Electricity, gas and water	914,895	740,226
Entertainment	104,060	132,525
Staff welfare fund	200,000	150,000
Vehicle running (POL)	1,304,365	739,067
Uniform expenses	25,611	26,074
Audit fee	20,000	12,500
Advertisement	312,402	163,436
Newspapers and magazines	68,321	48,740
Other function/research activity	2,970,361	1,529,338
Compensation to deceased employees	-	200,000
Loss on sale of assets	-	622,564
Miscellaneous expenses	103,492	98,339
	<u>52,794,341</u>	<u>50,150,150</u>

NA

Amir Alam Khan & Co.
Chartered Accountants

55/1, Bank Road, Rawalpindi

Tele: 5563483, 5563256

Fax : 5517358

E-mail: aakco@brain.net.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the annexed balance sheet of **Development account of Pakistan Museum of Natural History (PMNH)** as at June 30, 2010, the related income and expenditure account and cash flow statement together with the notes forming part thereof, (here-in-after 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 include 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 foundation has not charged depreciation on property, plant and equipment which is a contravention with the criteria 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 in all material respect the financial position of the **Development account of Pakistan Museum of Natural History (PMNH)** as at June 30, 2010 and of its surplus and cash flow for the year then ended in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi, 30 - 12 - 10


(Amir Alam Khan & Co.)
Chartered Accountants
Habib Fakhriuddin FCA


**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
BALANCE SHEET AS AT JUNE 30, 2010**

	Note	2010 (Rupees)	2009 (Rupees)
FUNDS AND GRANTS			
General fund	3	132,747,138	132,747,138
Pakistan science foundation grant	4	200,000	200,000
Japanese grant	5	15,719,500	15,719,500
		148,666,638	148,666,638
NON-CURRENT ASSETS			
Property, plant and equipment	6	148,666,249	148,666,249
CURRENT ASSETS			
Cash and bank balances	7	389	389
		148,666,638	148,666,638

The annexed notes from 1 to 10 form an integral part of these financial statements.

Islamabad, 30-12-10



ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad



DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
INCOME AND EXPENDITURE ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2010**

	Note	2010 (Rupees)	2009 (Rupees)
INCOME			
GRANT FROM FEDERAL GOVERNMENT		.	3,672,000
		<hr/>	<hr/>
		.	3,672,000
EXPENDITURE			
	8	.	(1,588,581)
		<hr/>	<hr/>
SURPLUS TRANSFERRED TO GENERAL FUND		<u>. .</u>	<u>2,083,419</u>

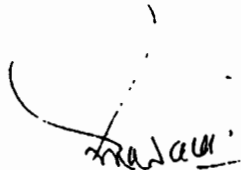
AK

The annexed notes from 1 to 10 form an integral part of these financial statements.

Islamabad, 30 - 12 - 10



ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad



DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Islamabad

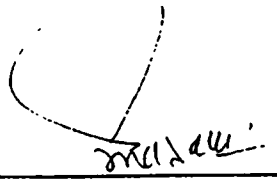
**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
CASH FLOW STATEMENT
FOR THE YEAR ENDED JUNE 30, 2010**

	2010 (Rupees)	2009 (Rupees)
CASH FLOWS FROM OPERATING ACTIVITIES		
Surplus before working capital changes	.	2,083,419
Net cash generated from operating activities	.	2,083,419
CASH FLOWS FROM INVESTING ACTIVITIES		
Property, plant and equipment	.	(2,033,419)
Net cash used in investing activities	.	(2,033,419)
CASH FLOWS FROM FINANCING ACTIVITIES		
General fund	.	(50,000)
Net cash used in financing activities	.	(50,000)
NET INCREASE IN CASH AND CASH EQUIVALENTS	.	.
CASH AND CASH EQUIVALENTS AT BEGINNING OF THE YEAR	389	389
CASH AND CASH EQUIVALENTS AT END OF THE YEAR	389	389

The annexed notes from 1 to 10 form an integral part of these financial statements.

Islamabad, 30 - 12 - 10


 ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad


 DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

**PAKISTAN MUSEUM OF NATURAL HISTORY
DEVELOPMENT ACCOUNT
NOTES TO THE FINANCIAL STATEMENTS FOR THE YEAR ENDED JUNE 30, 2010**

1. BACKGROUND AND OBJECTIVE

Pakistan Museum of Natural History (PMNH) is a science center of Pakistan Science Foundation (PSF) established under Pakistan Science Foundation Act 1973, with an objective of promoting and financing scientific activities having a bearing on socio-economic needs of country. Main objective of PMNH is to establish a Museum of Natural History.

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

These financial statements have been prepared under the historical cost convention.

2.2 BASIS OF PREPARATION

These financial statements have been prepared under cash receipt and payment method of accounting.

2.3 PROPERTY, PLANT AND EQUIPMENT

These are stated at cost. No depreciation is charged.

	2010 (Rupees)	2009 (Rupees)
3. GENERAL FUND		
Opening balance	132,747,138	130,713,719
Transfer to government of Pakistan	-	(50,000)
Surplus for the year	-	2,083,419
	132,747,138	132,747,138

4. PAKISTAN SCIENCE FOUNDATION GRANT

This represents the grant from Pakistan Science Foundation for the establishment of display centre received during 1998-1999.

5. JAPANESE GRANT

This represents the cultural grant assistance from Government of Japan received during financial year 1994-1995. *NA*

6. PROPERTY, PLANT AND EQUIPMENT

PARTICULARS	C O S T			
	AS AT JULY 01, 2009	ADDITIONS	DELETIONS	AS AT JUNE 30, 2010
Land	2,576,000	-	-	2,576,000
Building	87,150,893	-	-	87,150,893
Motor vehicles	5,691,447	-	-	5,691,447
Display centre	10,370,351	-	-	10,370,351
Generator	8,990	-	-	8,990
Audio visual equipment	13,235,840	-	-	13,235,840
Laboratory equipment	11,778,903	-	-	11,778,903
Computer equipments	10,825,224	-	-	10,825,224
Books	4,242,784	-	-	4,242,784
Furniture and fixture	1,867,967	-	-	1,867,967
Air conditioners	917,850	-	-	917,850
2010 - Rupees	148,666,249	-	-	148,666,249
2009 - Rupees - restated	146,632,830	3,119,850	1,086,431	148,666,249

7. This represents unutilised portion of advance refunded by the construction consultant deposited in UBL CD-70 account.

	2010 (Rupees)	2009 (Rupees)
8. EXPENDITURE		
Consultancy fee	-	330,058
Honorarium	-	128,632
Loss on sale of fixed assets	-	1,036,431
Miscellaneous	-	82,621
Tender advertisement	-	10,839
	<u>-</u>	<u>1,588,581</u>

9. DATE OF AUTHORIZATION FOR ISSUE

These financial statements have been authorised for issue on _____ by the Board of Trustees.

10. FIGURES

In these financial statements figures have been rounded off to the nearest rupee and of the previous year have been re-arranged and re-grouped wherever necessary to facilitate comparison. *AA*

Islamabad, 30 - 12 - 10


 ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad


 DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

Amir Alam Khan & Co.
Chartered Accountants

55/1, Bank Road, Rawalpindi

Tele: 5563483, 5563256

Fax : 5517358

E-mail: aakco@brain.net.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

We have audited the annexed receipt and payment account of **Miscellaneous funds (UBL Account # CD-70) Pakistan Museum of Natural History (PMNH)** for the year ended as at June 30, 2010, 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 include 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, after due verification, we report that:

In our opinion, and to the best of our information and according to the explanation given to us, this receipt and payment account give the information as required and present fairly in all material respect the receipts and payments of the **Miscellaneous funds (UBL Account # CD-70) Pakistan Museum of Natural History (PMNH)** during the year ended as at June 30, 2010, in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi. 30 - 12 - 10

Amir Alam Khan
(Amir Alam Khan & Co.)

Chartered Accountants

Habib Falehuddin FCA MA


**PAKISTAN MUSEUM OF NATURAL HISTORY
MISCELLANEOUS FUNDS (UBL ACCOUNT # CD-70)
RECIPT AND PAYMENT ACCOUNT FOR THE YEAR ENDED JUNE 30, 2010**

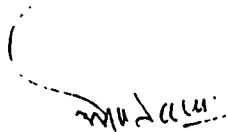
	2010 RUPEES	2009 RUPEES
OPENING BALANCE - CASH AT BANK	623,848	698,223
RECEIPTS		
Miscellaneous	717,500	21,447
	1,341,348	719,670
PAYMENTS		
Miscellaneous	934,979	95,822
	934,979	95,822
CLOSING BALANCE - CASH AT BANK	406,369	623,848

Islamabad,

30 - 12 - 10



ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad



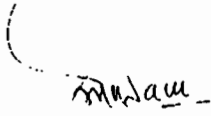
DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

PAKISTAN MUSEUM OF NATURAL HISTORY
STATEMENT OF MISCELLANEOUS FUNDS (UBL ACCOUNT # CD-70) RECEIPT AND PAYMENT
FOR THE YEAR ENDED JUNE 30, 2010

PMNH DEVELOPMENT FUND	OPENING BALANCE	FUNDS RECEIVED DURING THE YEAR	EXPENDITURES INCURRED DURING THE YEAR	TRANSFERS MADE DURING THE YEAR	CLOSING BALANCE
DC	389	-	-	-	389
GEOlogical symposium	8,807	-	-	-	8,807
UNESCO W SHOP	76,288	-	(76,000)	-	288
MISCELLANEOUS	31,197	39,626	(66,824)	-	3,999
SECURITY DEP.CANT	3,000	-	-	-	3,000
PMNH CONSUL	197,027	-	-	-	197,027
PSF BIO 268	307,140	-	(161,508)	-	145,632
RENT & RESIDENTIAL ACCOMODATION	-	184,174	(175,956)	-	8,218
RECTIFIED SPIRT	-	250,000	(250,000)	-	-
BIODIVERSITY SYMPOSIM	-	-	(5,000)	-	(5,000)
CAR ADVANCE	-	3,380	-	-	3,380
PURCHASE OF VEHICLE	-	53,320	(20,691)	-	32,629
PSF INST GRANT FOR DIMOND CUTTING MACHINE	-	187,000	(179,000)	-	8,000
TOTAL	623,848	717,500	(934,979)	-	406,369

Islamabad, 30-12-10

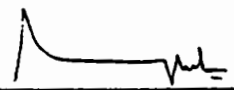

ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad


DIRECTOR GENERAL
Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

PAKISTAN MUSEUM OF NATURAL HISTORY
STATEMENT OF MISCELLANEOUS FUNDS (UBL ACCOUNT # CD-70) RECEIPT AND EXPENDITURES
FOR THE YEAR ENDED JUNE 30, 2010

DEVELOPMENT FUND	DC	SMALL MAMAL	JEO	FOCUS SALUOH	SIAMPO ADV TEC	UNESCO IN SHOP	OP LAM	MISC EXPENSES	DEV TEND FEE	SECURITY DEF CHRG	S C PMSALABAD	SAT COMBA PROG	RDP & RESIDENTIAL ACCOMODATI ON	PSM COMBA	BIOHERSIT SYMPOSIUM	PSF BIO 2008	CAR ADVANCE	PURCHASE OF VEHICLE	PSF NET GRANT FOR DRONE CUTTING MACHINE		
Rupees																					
OPENING BALANCE	389		9,807			76,288		31,197	2,000	3,000						192,407		307,140			
Fund received during the year								39,626					184,174				3,380	53,320	187,000		
Fund Transferred during the year																					
	389		9,807			76,288		70,823	2,000	3,000			184,174				192,407	307,140	3,380	53,320	187,000
EXPENDITURE																					
Miscellaneous						76,000		66,824					175,956		5,000	161,500		20,891	179,000		
Development tender fee																					
PSF bio project																					
TOTAL						76,000		66,824					175,956		5,000	161,500		20,891	179,000		
CLOSING BALANCE	389		9,807			288		3,999	2,000	3,000			8,218		192,407	(5,000)	145,632	3,380	32,629	8,000	

Islamabad. 30-12-10


 ASSISTANT DIRECTOR
 Assistant Director (Accounts)
 Pakistan Museum of Natural History
 Islamabad


 DIRECTOR GENERAL
 Director General
 Pakistan Museum of Natural History
 Garden Avenue Islamabad.

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
FINANCIAL STATEMENTS
JUNE 30, 2010**

Amir Alam Khan & Co.
Chartered Accountants
55/1, Bank Road, Rawalpindi
Tele: 5563483, 5563256
Fax : 5517358
E-mail: aakco@brain.net.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES


We have audited the annexed consolidated receipt and payment account of **Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC)** for the year ended as at June 30, 2010, 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 include 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, after due verification, we report that:

In our opinion, and to the best of our information and according to the explanation given to us, this receipt and payment account give the information as required and present fairly in all material respect the receipts and payments of the **Non-development account of Pakistan Scientific and Technological Information Centre (PASTIC)** during the year ended as at June 30, 2010, in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi,
30 - 12 - 10



(Amir Alam Khan & Co.)
Chartered Accountants
Habibullahuddin FCA

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (NON-DEVELOPMENT)
FOR THE YEAR ENDED JUNE 30, 2010**

	2010 RUPEES	2009 RUPEES
RECEIPTS		
Government grants	57,000,000	52,000,000
	57,000,000	52,000,000
PAYMENTS		
Salaries, and allowances	25,442,649	23,330,522
House rent	8,291,336	6,354,221
Printing, stationery and consumable stores	792,454	948,796
Newspaper	501,834	620,274
Entertainment	67,903	42,631
Postage, telegrams, Internet and telephone	915,111	790,580
Electricity, water and gas	978,208	771,299
Vehicle running expenses	846,224	681,752
Traveling and conveyance	232,960	124,651
Medical Facility	3,668,502	5,056,835
Advertisement	153,000	262,341
Repair and maintenance-office equipment	91,371	158,703
Repair and maintenance-transport	345,517	391,262
Repair and maintenance-furniture & fixtures	56,624	32,715
Repair and maintenance-building	633,563	285,899
Computer expenses (Hardware, software, IT Equipment & Computer Stationary)	705,395	232,982
Staff welfare funds & Uniforms	414,440	307,335
Bank charges and others	-	18,841
Conferences, seminar & workshops	638,425	532,229
Audit fee/ charges	20,000	12,500
Rent Office building	342,000	342,000
Purchase of transport	3,817,000	2,359,000
Purchase of plant and machinery	247,372	-
Purchase of furniture & fixtures	34,790	2,100
Data bases, journals and annual subscriptions	1,496,640	1,433,000
National bureau (TISD)	653,536	997,487
Pension contribution	4,824,157	5,225,750
Foreign expert assistance	600,000	600,000
Miscellaneous & Unforeseen	188,989	84,295
	57,000,000	52,000,000
EXCESS OF RECEIPTS OVER PAYMENTS	-	-


Islamabad,

30 - 12 - 10




DIRECTOR GENERAL

DR. MANZOOR HUSSAIN SOOMRO
Director General
PASTIC National Center,
Quaid-i-Azam University Campus,
Islamabad



ADDITIONAL DIRECTOR (ADMIN)

MALIK KHALID MEHMOOD
Additional Director (Admin)
Pastic National Centre
Islamabad - 84.



ASSISTANT DIRECTOR
(ACCOUNTS)

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

PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (NON-DEVELOPMENT)
FOR THE YEAR ENDED JUNE 30, 2010

PARTICULARS	ISLAMABAD RUPEES	KARACHI RUPEES	LAHORE RUPEES	PESHAWAR RUPEES	QUETTA RUPEES	FAISALABAD RUPEES	MUZAFARABAD RUPEES	2010 RUPEES	2009 RUPEES
RECEIPTS									
Government grant	57,000,000	-	-	-	-	-	-	57,000,000	52,000,000
Transferred to sub-centres	(10,546,406)	4,102,458	2,482,080	1,632,233	782,248	916,925	630,462	-	-
	<u>46,453,594</u>	<u>4,102,458</u>	<u>2,482,080</u>	<u>1,632,233</u>	<u>782,248</u>	<u>916,925</u>	<u>630,462</u>	<u>57,000,000</u>	<u>52,000,000</u>
PAYMENTS									
Salaries and allowances	19,305,627	2,688,456	1,222,575	1,092,187	274,133	502,895	356,776	25,442,649	23,330,522
House rent (residential)	6,860,936	615,510	282,450	226,260	10,830	118,140	177,210	8,291,336	6,354,221
Printing and stationery	728,939	7,524	13,065	13,866	14,847	8,320	5,893	792,454	948,796
Newspapers/books/journals	477,646	8,703	2,256	3,986	5,664	3,579	-	501,834	620,274
Entertainment	51,090	3,008	4,475	-	1,000	5,755	2,575	67,903	42,631
Communication	686,110	43,234	34,208	50,140	32,221	54,342	14,856	915,111	790,580
Electricity, water and gas	834,930	57,363	41,391	17,270	27,254	-	-	978,208	771,299
Vehicle running/POL charges	748,596	20,200	40,357	29,425	7,646	-	-	846,224	681,752
Traveling Allowance (TA/DA)	166,965	23,140	1,570	25,954	14,481	850	-	232,960	124,651
Medical Facility	2,312,128	379,622	745,421	99,797	65,534	33,000	33,000	3,668,502	5,056,835
Advertisement	153,000	-	-	-	-	-	-	153,000	262,341
Repair and maintenance									
-Office equipment	44,497	25,569	1,900	9,489	500	9,416	-	91,371	158,703
-Transport	291,841	17,446	13,495	19,435	3,300	-	-	345,517	391,262
-Furniture and fixtures	37,580	-	-	3,000	-	12,400	3,644	56,624	32,715
-Building	592,754	11,362	4,205	6,199	4,365	7,800	6,875	633,563	285,899
Computer expenses	644,642	960	12,945	6,630	9,650	14,500	16,067	705,395	232,982
Staff welfare fund/uniforms/liveries	411,350	1,660	-	-	1,430	-	-	414,440	307,335
Bank charges	-	-	-	-	-	-	-	-	18,841
Conference seminars and workshops	404,937	78,635	22,979	13,344	3,000	111,660	3,870	638,425	532,229
Audit fees/charges	20,000	-	-	-	-	-	-	20,000	12,500
Rent- office building	-	102,000	-	-	240,000	-	-	342,000	342,000
Purchase of office transport	3,817,000	-	-	-	-	-	-	3,817,000	2,359,000
Purchase of plant and machinery	185,192	-	21,895	-	40,285	-	-	247,372	-
Purchase of furniture and fixtures	8,900	-	-	-	4,500	21,390	-	34,790	2,100
Data bases, journals and annual subscription	1,496,640	-	-	-	-	-	-	1,496,640	1,433,000
National Bureau TISD	653,536	-	-	-	-	-	-	653,536	997,487
Pension contribution	4,824,157	-	-	-	-	-	-	4,824,157	5,225,750
Foreign expert assistance	600,000	-	-	-	-	-	-	600,000	600,000
Miscellaneous/fertilizers/unforeseen expenses	94,601	18,066	16,855	15,251	21,608	12,878	9,696	188,989	84,295
	<u>46,453,594</u>	<u>4,102,458</u>	<u>2,482,080</u>	<u>1,632,233</u>	<u>782,248</u>	<u>916,925</u>	<u>630,462</u>	<u>57,000,000</u>	<u>52,000,000</u>

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (NON-DEVELOPMENT)
FOR THE YEAR ENDED JUNE 30, 2010**

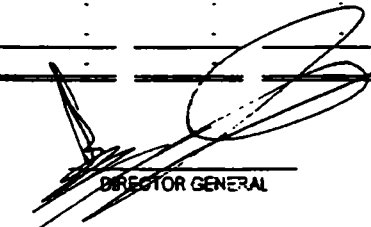
PARTICULARS	ISLAMABAD RUPEES	KARACHI RUPEES	LAHORE RUPEES	PESHAWER RUPEES	QUETA RUPEES	FAISALABAD RUPEES	MUZAFARABAD RUPEES	2010 RUPEES	2009 RUPEES
Excess of receipts over payments
Add-Opening balances
Cash in hand
Cash at bank

Represented by:
Closing balance of
Cash in hand
Cash at bank

.
.

Islamabad

30-12-10



DIRECTOR GENERAL

DR. MANZOOR HUSSAIN
Director General
PASTIC National Centre
Quaid-i-Azam University
Islamabad



ADDITIONAL DIRECTOR (ADMIN)

MALIK KHALID MEHMOOD
Additional Director (Admin)
Pastic National Centre
Islamabad



ASSISTANT DIRECTOR (ACCOUNTS)

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



Amir Alam Khan & Co.
Chartered Accountants
55/1, Bank Road, Rawalpindi
Tele: 5563483, 5563256
Fax : 5517358
E-mail: askco@brain.net.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES

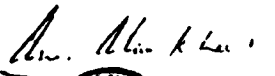
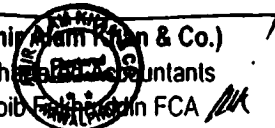
We have audited the annexed consolidated receipt and payment account of Reprographic and documentation account of Pakistan Scientific and Technological Information Centre (PASTIC) for the year ended as at June 30, 2010, and we state that we have obtained all the information and explanations which, to 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 include 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, after due verification, we report that:

In our opinion, and to the best of our information and according to the explanation given to us, this receipt and payment account give the information as required and present fairly in all material respect the receipts and payments of the Reprographic and documentation account of Pakistan Scientific and Technological Information Centre (PASTIC) during the year ended as at June 30, 2010, in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi, 30 - 12 - 10


(Amir Alam Khan & Co.)
Chartered Accountants
Habib Fakhri, FCA 

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (REPROGRAPHIC AND DOCUMENTATION)
FOR THE YEAR ENDED JUNE 30, 2010**

	2010 RUPEES	2009 RUPEES
OPENING BALANCE		
Cash at bank		
Reprography	3,094,425	2,184,159
Documentation	906,396	739,427
	4,000,821	2,923,586
RECEIPTS		
Reprography	4,686,847	4,276,236
Documentation	200,442	767,777
Profit on bank account	137,068	65,045
Transferred from sub-centres	135,872	123,640
	5,160,229	5,232,698
PAYMENTS		
Reprography	4,341,035	3,431,015
Documentation expenses	-	600,526
Bank charges	371	282
Transferred to head office	135,872	123,640
	4,477,278	4,155,463
CLOSING BALANCES		
Cash at bank		
Reprography	3,577,305	3,094,425
Documentation	1,106,467	906,396
	4,683,772	4,000,821

Islamabad,

30-12-10


DIRECTOR GENERAL

DR. MANZOOR HUSSAIN SOOMRO
Director General
PASTIC National Center,
Quaid-i-Azam University Campus,
Islamabad


ADDITIONAL DIRECTOR

MALIK KHALID MEHMOOD
(ADMIN)
Additional Director (Admin)
Pastic National Centre
Islamabad



ASSISTANT DIRECTOR
(ACCOUNTS)

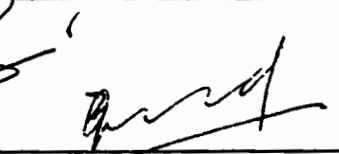
GHAFFAR AHMAD
Assistant Director (Accounts)
PASTIC National Centre, Quaid-i-Azam
University Campus, Islamabad

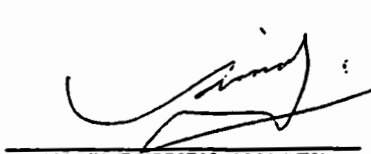
PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
CONSOLIDATED RECEIPTS AND PAYMENTS ACCOUNT (REPROGRAPHY & DOCUMENTATION)
FOR THE YEAR ENDED JUNE 30, 2010

PARTICULARS	ISLAMABAD RUPEES	KARACHI RUPEES	LAHORE RUPEES	PESHAWAR RUPEES	QUETTA RUPEES	FAISALABAD RUPEES	MUZAFARABAD RUPEES	2010 RUPEES	2009 RUPEES
OPENING BALANCE									
CASH AT BANK									
Reprography	3,094,425	-	-	-	-	-	-	3,094,425	2,184,159
Documentation	896,833	2,452	1,823	5,288	-	-	-	906,396	739,427
	<u>3,991,258</u>	<u>2,452</u>	<u>1,823</u>	<u>5,288</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,000,821</u>	<u>2,923,586</u>
RECEIPTS									
Reprography	4,686,847	-	-	-	-	-	-	4,686,847	4,276,236
Documentation	60,377	90,575	18,110	2,508	1,892	21,354	5,626	200,442	767,777
Profit on bank account	137,068	-	-	-	-	-	-	137,068	65,045
Transferred from sub-centers	135,872	-	-	-	-	-	-	135,872	123,640
	<u>5,020,164</u>	<u>90,575</u>	<u>18,110</u>	<u>2,508</u>	<u>1,892</u>	<u>21,354</u>	<u>5,626</u>	<u>5,160,229</u>	<u>5,232,698</u>
PAYMENTS									
Reprography	4,341,035	-	-	-	-	-	-	4,341,035	3,431,015
Documentation expenses	-	-	-	-	-	-	-	-	600,526
Bank charges	-	180	191	-	-	-	-	371	282
Transferred to head office	-	90,000	17,000	-	1,892	21,354	5,626	135,872	123,640
	<u>4,341,035</u>	<u>90,180</u>	<u>17,191</u>	<u>-</u>	<u>1,892</u>	<u>21,354</u>	<u>5,626</u>	<u>4,477,278</u>	<u>4,155,463</u>
CLOSING BALANCES									
CASH AT BANK									
Reprography	3,577,305	-	-	-	-	-	-	3,577,305	3,094,425
Documentation	1,093,082	2,847	2,742	7,796	-	-	-	1,106,467	906,396
	<u>4,670,387</u>	<u>2,847</u>	<u>2,742</u>	<u>7,796</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4,683,772</u>	<u>4,000,821</u>

Islamabad, 30-12-10


 DIRECTOR GENERAL
DR. MANZOOR HUSSAIN SOOMRO
 Director General
 PASTIC National Center,
 Quaid-i-Azam University Campus,
 Islamabad


 ADDITIONAL DIRECTOR (ADMIN)
MALIK KHALID GHAIMOOR
 Additional Director (Admin)
 Pastic National Centre
 Islamabad


 ASSISTANT DIRECTOR (ACCOUNTS)
GHAFFAR AHMAD
 Assistant Director (Accounts)
 PASTIC National Centre, Quaid-i-Azam
 University Campus, Islamabad

Amir Alam Khan & Co.
Chartered Accountants
55/1, Bank Road, Rawalpindi
Tele: 5563483, 5563256
Fax : 5517358
E-mail: aakco@brain.net.pk

AUDITORS' REPORT TO THE BOARD OF TRUSTEES


We have audited the annexed receipt and payment account of **DEVELOPMENT PROJECT-STRENGTHENING & ENHANCEMENT OF REPOGRAPHIC SERVICES OF PASTIC** for the year ended as at June 30, 2010, 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 include 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, after due verification, we report that:

In our opinion, and to the best of our information and according to the explanation given to us, this receipt and payment account give the information as required and present fairly in all material respect the receipts and payments of the **DEVELOPMENT PROJECT-STRENGTHENING & ENHANCEMENT OF REPOGRAPHIC SERVICES OF PASTIC** during the year ended as at June 30, 2010, in accordance with the approved accounting standards as applicable in Pakistan.

Rawalpindi, 30 - 12 - 10




(Amir Alam Khan & Co.)
Chartered Accountants
Habib Fakhruddin FCA

**PAKISTAN SCIENTIFIC AND TECHNOLOGICAL INFORMATION CENTRE
DEVELOPMENT PROJECT-STRENGTHENING & ENHANCEMENT OF REPOGRAPHIC SERVICES OF PASTIC
RECEIPTS AND PAYMENTS ACCOUNT
FOR THE YEAR ENDED JUNE 30, 2010**

	2010 RUPEES
RECEIPTS	
Government grants	1,405,000
	1,405,000
PAYMENTS	
Acquisition of Machinery & Equipment.	1,195,720
Renovation of Repographic Section	209,280
	1,405,000
EXCESS OF RECEIPTS OVER PAYMENTS	-

Islamabad,
30 - 12 - 10



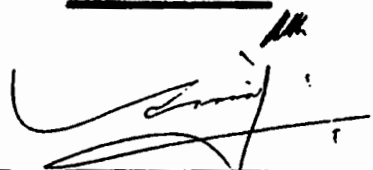
DIRECTOR GENERAL

DR. MANZOOR HUSSAIN SOOMRO
Director General
PASTIC National Center,
Quaid-i-Azam University Campus,
Islamabad



ADDITIONAL DIRECTOR (A)

MALIK KHALID MEHMOOD
Additional Director (Admin)
Pastic National Centre
Islamabad



J.T. DIRECTOR (ACCOU)

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

	2010 (Rupees)	2009 (Rupees)
14. PRIOR YEAR ADJUSTMENTS		
Debit balance written off	.	3,000
Credit balance written back	.	9,850
	<u> </u>	<u> </u>
	.	12,850
	<u> </u>	<u> </u>

15. DATE OF AUTHORIZATION FOR ISSUE

These financial statements have been authorized for issue on _____ by the Board of Trustees.

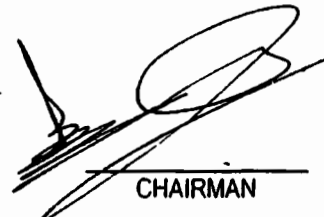
16. FIGURES

In these financial statements figures have been rounded off to the nearest rupee and of the previous year have been re-arranged and re-grouped wherever necessary to facilitate comparison.

Islamabad, 30 - 12 - 10



TRUSTEE



CHAIRMAN

**PAKISTAN SCIENCE FOUNDATION
ACT-III, 1973**

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 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 there to,

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 provision of this Act, to acquire, hold and dispose of property, both movable and immovable, and shall be 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 centers;

- 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 centers, 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 by the President

(2) The remuneration and other terms and conditions of service of the 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 Board (1) The Chairman of the Board shall be the Chairman of the Foundation and shall be appointed from amongst the 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. Term of 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.

8. Meetings of the Board. (1) The meeting 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 whole-time members of the Board.

11. Delegation of Powers. The Board may, from time to time, delegate the Chairman or the Executive Committee such of its power and functions as it may consider necessary.

12. Adhoc Committees. The Foundation may set up adhoc 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.

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

13. **Funds.** The funds of the Foundation shall consist of:
- a) Grants made by the Federal Government and the Provincial Governments;
 - b) Donation 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 Reports.** (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 along with the audited accounts of the Foundation.
- (2) The annual report along with 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 2009-10****A: Non-Development Budget**

S. No.	Project Title &No.	Name & Address of PI	Sanctioned Cost (Rs.)
1.	Biological Studies and Integrated Management of Lentil Wilt in Pakistan PSF/Res/P-PMAS.AAU/ Agr (373)	Prof. Dr. Abdul Rauf Department of Plant Pathology Pir Mehr Ali Shah Arid Agriculture University Rawalpindi	1,990,000
2.	Assessment of Agricultural Drought Prone Areas of Pothwar and Agro-Ecological Zoning (AEZ) Using Remote Sensing Techniques PSF/Res/P-UET/Agr (376)	Engr. Ghulam Nabi Assistant Professor Centre of Excellence in Water Resources Engineering University of Engineering and Technology (UET) Lahore	1,040,000
3.	Entomopathogenic Fungi and Diatomaceous Earths for the Control of <i>Tribolium castaneum</i> (Herbst.) (Coleoptera: Tenebrionidae) on Stored Wheat PSF/Res/P-AU/Agr (381)	Dr. Waqas Wakil, Assistant Professor Department of Agri. Entomology University of Agriculture Faisalabad	1,987,980
4.	Synthesis of Carbon NanoTubes and Carbonated Hydroxyapatite Composites PSF/RES/P-COMSATS/Chem (416)	Dr. Rafaqat Hussain Assistant Professor Deptt of Biomedical Materials Sciences, COMSATS, Lahore	1,904,065
5.	Studies on Hepatoprotive effects of Bioactive Secondary Metabolites of Plants by using Antioxidant and relevant Bioassays PSF/RES/S-HEJ/Chem (417)	Prof. Dr. M. Iqbal Choudhary Director HEJ Research Instt. of Chemistry University of Karachi Karachi	1,456,560
6.	Computer aided Identification and Synthesis of a Glucosidase	Prof. Dr. Farazana Latif Ansari	1,978,882

	inhibitoes. PSF/RES/C-QU/Chem (419)	Department of Chemistry Quaid-i-Azam University Islamabad	
7.	Value Addition to Topaz by Neutron Irradiation PSF/C-PINSTECH/Earth (84)	Dr. Muhammad Usman Rajput Principal Scientist Physics Division, PINTECH, Islamabad	732,950
8.	Basement Shear and Transpression near a Restraining Bend on the Chaman Fault an Investigation of the Structural Kinematics and Seismic Hazard in Northern Baluchistan PSF/Res/B-BU/Earth (86)	Mr. Din Muhammad Kakar Assistant Professor Department of Geology University of Balochistan Quetta	1,690,600
9.	Heavy Metals Contamination in Soil due to Application of Industrial wastes and their Phytoremediation by Maize (<i>Zea mays</i>) PSF/Res/F-GU/Envr (90)	Dr. Muhammad Jamil Khan, Assistant Professor Department of Social Science Faculty of Agriculture Gomal University, Dera Ismail Khan	400,000
10.	Using GIS Models for Design & Development of Effective Air Quality Management System PSF/Res/P-FJWU/Envr (92)	Dr. Sheikh Saeed Ahmed Assistant Professor Deptt. of Environmental Sciences Fatima Jinnah Women University, Rawalpindi.	1,275,010
11.	Removal of Inorganic and Organic Pollutants from water/industrial wastes by Micellar Enhanced Ultra Filtration (MEUF) PSF/Res/C-QAU/Envr (93)	Prof. Dr. M. Siddiq Department of Chemistry Quaid-e-Azam University, Islamabad	1,293,230
12.	Development of Rapid and Robust Analytical Methodologies for Detection of Elemental Containments in Environmental Samples using Laser Induced Breakdown Spectroscopy (LIBS) PSF/Res/P-NUST/Envr (95)	Dr. Muhammad Ali Awan Assistant Professor Institute of Environmental Science & Engineering National University of Science & Technology Rawalpindi.	243,500

13.	Potential use of Yeast in Decontamination of Arsenic Polluted Wastewater PSF/Res/P-PU/Envr (97)	Dr. Abdul Rehman Lecturer Deptt. of Microbiology and Molecular Genetics University of the Punjab Lahore.	336,000
14.	Prevalence of Non-Alcoholic Liver Disease in Local Population of Pakistani origin PSF/Res/P-UAAR/Med (259)	Dr. Ghazala Kaukab Associate Professor Department of Biochemistry PMAS-Arid Agriculture University, Rawalpindi	1,753,963
15.	Computer-aided Identification of Cholinesterase Inhibitors for the Treatment of Alzheimer's Disease and Related Dementia PSF/Res/S-KU/Med (261)	Dr. Zaheer-ul-Haq Qasmi Assistant Professor Panjwani Center for Molecular Medicine & Drug Research, University of Karachi, Karachi	1,174,860
16.	To assess the effect of dietary calcium intake and vitamin D status on bone turnover markers in Pakistani adult females PSF/Res/S-AKU/Med(263)	Dr. Ayesha Habib Khan Assistant Professor Department of Pathology and Microbiology The Aga Khan University, Karachi	1,984,416
17.	Health Seeking Behaviour among Adult Patients Attending OPDs of Public Hospitals in Karachi PSF/RES/S-PMRC/Med (269)	Dr. Sultana Habibullah Senior Medical Officer Pakistan Medical Research Council Dow Medical College, Karachi	85,906
18.	Genetic Screening of Pakistani Population for CYP2D6 Genotypes PSF/Res/C-IBGE/Med (271)	Dr. Atika Mansoor Principal Scientific Officer Institute of Biomedical & Genetic Engineering, KRL, Islamabad	1,640,310
19.	Analysis of Association between TNF-alpha Gene Polymorphism and Coronary Heart Disease in a Pakistani Population PSF/Res/C-QU/Med (272)	Dr. Qamar Javed Associate Professor Department of Biochemistry Quaid-i-Azam University, Islamabad	2,193,500
20.	New Approaches to Effective Pain Management: Clinical Potential of GABA Receptors Modulators in the Development of Chronic Pain PSF/Res/S-KU/Med (282)	Dr. Shabana Usman Simjee Assistant Professor H.E.J. Research Institute of Chemistry International Centre for Chemical & Biological	1,885,340

		Sciences University of Karachi, Karachi	
21.	Anti-inflammatory Effect of <i>Zingiber officinale</i> (Ginger) and Methylprednisolone on the Rat Model of Allergic Airway Inflammation PSF/RES/P-UHS/Med (292)	Dr. Muhammad Shahzad Assistant Professor Department of Pharmacology University of Health Sciences, Lahore	272,058
22.	Association between Neuregulin-1 Mutations and Schizophrenia in a Pakistani population : A case-control study PSF/Res/ S-AKU/Med (293)	Dr. Haider A. Naqvi Assistant Professor Department of Psychiatry the Aga Khan University, Karachi	1,476,600
	Total		2,8795,730

B. Natural Science Linkage Programme (NSLP)

S. No.	Project Title &No.	Name & Address of PI	Sanctioned Cost (Rs.)
23.	Pre and Post-Harvest Treatment of Food Grade Chemicals to Improve Peach Fruit Quality and Shelf-Life NSLP/P-UAAR (74)	Prof. Dr. Nadeem Akhtar Abbasi Chairman Department of Horticulture PMAS Arid Agriculture University, Rawalpindi	2,406,911
24.	Development of Slow Acting Toxicant Baits for Elimination of Underground Colonies of Crop & Building Termites NSLP/F-NIFA (76)	Dr. Abid Fareed Head Entomology Division, Nuclear Institute for Food & Agriculture, Tarnab, Peshawar.	2,335,956
25.	Escalating the feeding Value of Wheat Straw Through Ensiling with Rumen Digesta as an Inoculant in Ruminant Animals. NSLP/P-AU (78)	Prfo. Dr. Muhammad Sarwar Director Institute of Animal Nutrition & Feed Technology, University of Agriculture Faisalabad.	3,999,617

26.	Field Evaluation of Biopesticides/ Bioinoculants for Red Rot (Colletorichum Falcatum Went) Suppression & Enhanced Sugarcane Production NSLP/C-CIIT (79)	Prof. Dr. Fauzia Yousaf Hafeez Department of Biosciences COMSATS Institute of Information Technology, Islamabad	3,999,660
27.	Development of Package of Technology for Poultry Feed Irradiation in Pakistan NSLP/F-NIFA (82)	Dr. Aurang Zeb Principal Scientist Nuclear Institute for Food & Agriculture, Tarnab Peshawar	2,249,354
28.	Wheat Improvement by the Use of Wheat Targeted Genomic Approaches. NSLP/C-CIIT(51)	Prof Dr. Mohammad Maroof Shah. Department of Environmental Sciences CIIT, Faisalabad.	2,543,676

**DETAILS OF MONITORING AND
EVALUATION OF ON-GOING
PROJECTS DURING 2009-10**

**DETAILS OF MONITORING AND EVALUATION OF ON-GOING
PROJECTS DURING 2009-10****A. Non Development Budget****a. Semi-annual Reports**

S. No.	Project No.	Project Title	Reports
1.	F-NIFA/Agr (310)	Effect of mineral and organic nitrogen on yield and nitrogen nutrition of deciduous plum fruit orchards.	3 rd
2.	S-SAU/Agr (382)	Documentation of predatory spiders and their role in suppression of pests of major crops in Sindh.	1 st
3.	F-NIFA/Bio (141)	Mushroom cultivation and popularization as cottage industry in NWFP, Pakistan.	3 rd
4.	S-AKU/Bio (244)	The effect of ursodeoxycholic acid (UDCA) therapy on in- vitro gallbladder smooth muscle contractility.	2 nd
5.	S-KU/Bio (341)	Experimental farming of commercially important marine shrimps near Mirpur Sakro, Thatta.	2 nd
6.	P-AU/Bio (350)	Development, standardization and evaluation of probiotics in poultry.	2 nd
7.	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.	2 nd
8.	S-SALU/Bio (382)	Comparative characterization and recombinant study of indigenous keratinase enzymes.	1 st
9.	B-BUITMS/Bio (388)	Studies on regeneration of Juniper in Balochistan.	2 nd
10.	S-KU/Bio (404)	Isolation and characterization of bio-active protein from thermotolerant bacteria of sub-optimal habitat.	2 nd
11.	P-PU/Bio (410)	Effects of pesticides application and refugia on pest control potential of spider residing rice fields of Punjab, Pakistan.	1 st

- | | | | |
|-----|---------------------------|--|-----------------|
| 12. | P-AU/Bio (412) | Evaluation of sugarcane polysaccharides and glycoprotein as biological response modifiers and their therapeutic effects on Eimeria infection in chickens. | 1 st |
| 13. | P-PMASAAU/Bio (418) | Ethnobotanical survey of Thal desert, Punjab, Pakistan. | 1 st |
| 14. | C-QU/Bio (419) | Functional analysis of a proteinase inhibitor gene construct for insect resistance. | 1 st |
| 15. | P-PMASAAU/Bio (420) | Ecology, status and management of fisheries in Mangla Dam. | 1 st |
| 16. | Biotech /P-NIBGE/Ind (47) | Development of hyper producer cephalosporin c producing strain of <u>Acremonitun chrysogum</u> by RNA interference technique. | 3 rd |
| 17. | Biotech/P-NIBGE/Med (76) | Studies on genetics & mutations of low density lipoprotein receptor gene (LDLR); Implication in diagnosis, prognosis, treatment & management of familial hypercholesterolemia in Pakistan. | 2 nd |
| 18. | AJK-UAJK/Biotech (196) | Genetic analysis of field evaluation of potato genotypes in Azad Kashmir. | 3 rd |
| 19. | C-QU/Chem (408) | Molecularly designed precursors for chemical vapor deposition of ceramic materials. | 2 nd |
| 20. | S-NIA/Biotech (134) | Use of induced somatic mutation & biotechnology for the genetic improvement of sugar cane (Saccharum sp. Hybrid). | 2 nd |
| 21. | P-AU/Engg (53) | Decision support system for better crop productivity and environmental quality. | 1 st |
| 22. | P-PCRWR/Engg (81) | Water management practices for major crops under drought. | 2 nd |
| 23. | F-GIK/Engg (102) | Design, fabrication and installation of photovoltaic system with load controller for the generation of 4-5 Kw power. | 2 nd |

b. First Annual Reports

24. F-NIFA/Agr (310) Effect of mineral and organic nitrogen on yield and nitrogen nutrition of deciduous plum fruit orchards.
25. P-AU/Agr (319) Potential use of CO_2 as foliar fertilizer for wheat yield enhancement under salt stress: strategies for the future.
26. P-CABI/Agr(380) Exploration of bacloviruses prevalent in different agro-ecological zones of Pakistan and their evaluation against target lepidopteron pests.
27. P-UAAR/Bio (264) Selection of probiotic cultures for yogurt making.
28. C-PMNH/Bio (268) Studies on algae of major rivers of Punjab with especial emphasis on its consumption by economically important fishes.
29. C-QU/Bio (402) Study of the microbes and their role (ecological linkages) in most temperate coniferous forest ecozone in Murree hills range.
30. P-AU/Bio (405) A contribution to the rust flora of AJK (Azad Jammu & Kashmir) and adjacent northern area of Pakistan.
31. P-UAF/Bio (408) Preparation and characterization of legumes protein isolates to improve the nutritional and functional properties of baked products.
32. C-QU/Chem (408) Molecularly designed precursors for chemical vapor deposition of ceramic materials.
33. F-KUST/Chem (409) Phytochemical investigation and biological activity of genus *Sonchus* with emphasis on biologically active constituents.
34. S-KU/Earth (76) Geological, geochemical and technological properties of china clay deposits of Nagarparkar for their value added industrial application.
35. S-AKU/Med(232) Molecular epidemiology of AIDS in Pakistan.
36. S-ZMU/Med (238) Association of inflammatory cytokines and adipocytokines to glycemic control and blood lipid levels in ischemic stroke patients.
37. S-AKU/Med(249) Role of TFB2 (transcription factor-B2) in *Sulfolobus sulfataricus* gene expression.
38. C-QU/Phys (134) Measurements of photo-ionization cross section of atoms.

c. Second Annual Reports

39. P-AU/Agr (319) Potential use of Co₂ as foliar fertilizer for wheat yield enhancement under salt stress strategies for the future.
40. 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.
41. P-AU/Bio (356) Pigeon Newcastle disease virus: surveillance and pathogenicity for chickens and development of vaccine for control.
42. F-AU/Bio (403) Effect of sperm concentration, season and extenders on goat's semen integrity and fertility.
43. Biotech /P-NIBGE/Ind (47) Development of hyper producer cephalosporin C producing strain of *accremonitun chrysogum* by RNA interference technique.
44. F-NIFA/Chem (138) Development of processing method for pectin as value added product from citrus peel waste.
45. C-PINSTECH/Med (207) Helicobacter pylori in children: diagnostic method prevalence, strain identification and effect on growth in Pakistan.
46. S-AKU/Med (230) Evaluation of tumor behavior in breast cancer.
47. S-KU/Bio (342) Biology of edible crabs (*Portunus pelagicus* and *P. sanuinolentus*) occurring in the coastal waters of Karachi.
48. P-AU/Bio (352) Molecular epidemiology and immunohistochemistry of enteropathogenic escherichaia coli (EPEC) in bovine and human neonates.
49. P-AU/Bio (355) Pharmacological evaluation of two anti-hyperlipidaemic indigenous medicinal plants in albino rabbits and determination of their mechanisms of action.
50. P- PCRWR/Engg (80) Effect of land leveling on land use intensity, water use and water application efficiencies.
51. F-NIFA/Engg (216) Design and fabrication of a laboratory size screw extruder for conversion of agro-based materials into value added food and feed products.
52. P-KRL/Engg (284) Synthesis and characterization of PIEZO-electric BaTiO₃ crystals

53. C-QU/Phys (129) An investigator of collective excitation in density modulated nano-structures in magnetic field.
54. P-PU/Phys (131). Nonlinear electromagnetic wave propagation in plasma like media

d. Final Technical Reports

55. F-AU/Agr (372) Growth pattern and nutritional status of infants and toddlers in North West Frontier Province, Pakistan
56. F-NIFA/Bio (141) Mushroom cultivation and popularization as cottage industry in NWFP, Pakistan.
57. S-PCSIR/Bio (221) Preparation of products of economic importance (Chitin & Chitosan) from shellfish waste.
58. S-SU/Bio (287) Formulation of low cost quality fish feed from the indigenous raw material and its effects on growth and survival of major carps.
59. S-KU/Bio (341) Experimental farming of commercially important marine shrimps near Mirpur Sakro, Thatta.
60. P-AU/Bio (355) Pharmacological evaluation of two anti-hyperlipidaemic indigenous medicinal plants in albino rabbits and determination of their mechanisms of action.
61. S-KU/Bio(360) Hatchery culture of commercially important oysters.
62. Biotech /P-NIBGE/ Med (50) Detection of Y chromosome micro deletions associated with infertility in different geographic/ ethnic groups in Pakistan.
63. Biotech /P-NIBGE/ Agr (52) Bacteriocin production & its role in competition in rhizobial inoculants from a sustainable agriculture perspective
64. AJK-UAJK/Biotech (196) Genetic analysis of field evaluation of potato genotypes in Azad Kashmir
65. B-BU/Chem (252) Clinical applications of electro generated chemiluminescence's detection using Tris (2-2-bipyridine) Ruthenium(ii) with flow injection analysis
66. C-QU/Chem (270) Studies of vanadium organic ligand systems containing peptide linkage: synthesis, structural elucidation and biological application

67. C-QU/Chem (395) Stereoselective total synthesis of some antimalarial, antituberculous, antifungal and cytotoxic dihydroisocoumarin metabolites.
68. P-PU/Chem(406) Pilot scale production and quality evaluation of bio diesel from indigenous vegetable oil resources.
69. S-SU/Chem (411) Capillary gas chromatographic determination of glyoxal, methylglyoxal and dimethylglyoxal from biological fluids in fermented food.
70. C-PMNH/Earth (79) Biostatigraphic zonation and the economic significance of the ladshart limestone of opaleocene age in the salt range Pakistan
71. C-PMNH/Earth (81) Sedimentological studies of delta formation in western salt range
72. F-UET/Engg (87) Design and development of sugarcane planter for small and medium land holders of Pakistan
73. C-COMSATS/ Med (220) Epidemiological investigation of pertussis infection in Pakistan the first ever report of this type from Pakistan
74. P-PU/Phys (131) Nonlinear electromagnetic wave propagation in plasma like media

B. Natural Science Linkage Programme (NSLP)

a. Semi-annual Reports

S. No.	Project No.	Project Title	Reports
1.	NSLP/P-NIBGE (19)	Exploration of cotton germplasm potential against drought stress using genomic approaches".	1 st
2.	NSLP/F-AU (25)	Quantification of economic gain from chickpea crop sown on irrigated fields in southern NWFP & its implication for agricultural extension.	1 st
3.	NSLP/C-NARC (30)	Aflatoxin Contamination in Rice"	1 st
4.	NSLP/P-PU (53)	Natural compounds from allelopathic trees as antifungal agents against <i>Ascochyta Rabiei</i> (PASS).	

b. First Annual Report

- | | |
|---------------------|---|
| 5. NSLP/P-BARI (04) | Production of germplasm and breeding material of wheat for drought and heat tolerance. |
| 6. NSLP/P-NIAB (14) | Insecticide resistance management of lepidopteron pests of cotton |
| 7. NSLP/S-PARC (1) | Nematodes associated with almond (<i>Prunus amygdalus</i> (Batsch) and pomegranate (<i>Punica granatum</i> L.) and their management using oilcakes in Khuzdar and Kalat districts |

**SCIENTIFIC PUBLICATIONS PRODUCED
THROUGH PSF SUPPORTED COMPLETED
PROJECTS DURING 2009-10**

**SCIENTIFIC PUBLICATIONS PRODUCED THROUGH PSF SUPPORTED
COMPLETED PROJECTS DURING 2009-10**

Sr. No	Project No.	Publication
1.	P-AU/Agr (316)	<ol style="list-style-type: none">1. Nazir, J., Makky, M.B. Ilyass, M.M. Khan and M. Inam-ul-Haq 2008. Reaction of various citrus root stocks (Germplasm) against citrus root nematode (<i>Tylenchulus semipenetrans</i> Cobb) Pak. J. Bot., 40(6): 2693-2696.2. Nazir J., Makky, Safdar, A. Anwar and Riaz A. 2007. Populations dynamics of citrus nematode, <i>T. Semipenetrans</i> throughout the year at (PARS) Post Graduate Research Station Faisalabad. Pak. J. Phytopathol., 19(1): 94-97.3. Nazir Javed, J., Makky, Safdar A. Anwar and Riaz A. Chohan. 2007. Populations dynamics of citrus nematode, <i>T. Semipenetrans</i> of 90-citrus orchards at different localities of major citrus producing districts of Punjab Province, Pakistan In: Pak. J. phytopathol., 19(1):90-93.4. Safdar, A. Nazeer., A. Zia, M. Kamran, M. Hussain and M. Javed 2007. Root knot nematode reproduction and galling severity on thirteen vegetable crops. Proced. Inter. Symp. On Prospects of Horti. Ind. Pak: 310-314. Institute of Horticultural Sciences, University of Agriculture, Faisalabad.5. Nazir J., S. A. Anwar, Riaz, A., M. Javed and A. Zia 2007, Citrus diseases and their management. Proced. Inter. Symp. on Prospects of Horti. Ind. In Pak.: 151-157. Institute of Horticultural Sciences, University of Agriculture, Faisalabad.6. Nazir, J., Makky, J., Safdar, A. Anwar, and Riaz, A. 2007. Citrus root nematode, <i>Tylenchulus Semipenetrans</i> population associated with 15 citrus Root Stocks. In: Proced. Inter. Symp. on Prospects of Horti. Ind. Pak.: 366-367. Institute of Horticultural Sciences, University of Agriculture, Faisalabad.

Papers Submitted

1. N. Javed, M. Javed, M. M. Khan and A. Riaz 2008. Influence of soil pH on the movement and infection rate of juveniles of citrus nematode, (*T. semipenetrans*). Pak. J. phytopathol., Vol. 20(1): (Accepted).
 2. Nazir Javed, S. A. Anwar, Riaz Ahmad, Makky Javed and H.U. Khan. 2007. Biological tools for the management of root-knot nematodes meloidogyne Spp. on vegetables. International Symposium. NIBG, Faisalabad. (Accepted).
 3. Muhammad M. Javaid, Nazir Javed and Safdar A. Anwar 2009. Field evaluation of pesticides against citrus root nematode, (*Tylenchulus semipenetrans*) infestation. Pakistan Journal of Nematology. (Submitted).
 4. Muhammad M. Javaid, Nazir Javed and Safdar A. Anwar 2009. Efficacy of various organic amendments against citrus nematode, *T. semipenetrans*. Pakistan Journal of Nematology. (Submitted).
2. **P-AU/Agr (318)**
1. Kamran, M., M. Shahbaz, M. Ashraf and N.A. Akram. 2009. Alleviation of drought-induced adverse effects in spring wheat (*Triticum aestivum* L.) using proline as pre-sowing seed treatment. Pak. J. Bot. 41(2): 621-632
 2. Mahmood, T., M. Ashraf and M. Shahbaz. 2009. Does exogenous application of glycinebetain as pre-sowing seed treatment improve growth and regulates some key physiological attributes in wheat plants grown under water deficit conditions. Pak. J. Bot 41(3): 211-220

Papers Submitted

1. Shahnaz, M. M., M. Ashraf, and M. Shahbaz. Enhancing effect of exogenously applied trehalose on growth, photosynthesis, and mineral uptake of five wheat cultivars growth under water deficit conditions. Pak. J. Bot (submitted)
2. Masood, Y. M. Shahbaz and M. Ashraf. Variation in wheat (*Triticum aestivum* L.) to exogenous application of Glycinebetaine at tillering stage under water deficit conditions. Env. Exp. Bot (Submitted)
3. Akmal, A. M. Shahbaz, and M. Ashraf. Influence of foliar spray of proline at seedling stage on wheat

(Triticum aestivum L.) under water stress conditions. Pak. J. Bot

3. **S-PCSIR/Chem (292)**
 1. Alia Bano Munshi and Hina A. Siddiqui. Accumulation of organochlorine in edible fishes from the waste water of Karachi, Pakistan ,J Chem .Soc .Pak, 27(4),2005p:404-408
 2. Alia Bano Munshi and Hina A. Siddiqui. Determination of Level of PCBs small fishes from three different area of Karachi ,Pakistan ,Pak J Sci.Ind Res,2005,48(4),p247-251
 3. "Look before you eat" Article .Sci-Tech world ,Daily Dawn ,Saturday May 20-2006
A Presentation on "Level of pesticides residues contamination in imported, exported and locally consume food commodities in Pakistan" Eleventh International conference of Toxicology (ICT XII) from July 15-19,2007 in Montreal ,Canada.

4. **S-ZMU/Med (238)**
 1. Imran I Siddiqi Anila Jaleel. Iron Status Parameters in Preeclamptic Women " (2010) Archieves of Obstet and Gynecology Vol:Published online
Anila Jaleel Saima Aqil Farhan Jaleel "Adiponectin and Infarction size in subjects with and without cerebrovascular disease" (2009) Neurosciences Vol:14 (3): pp:7-9

5. **C-PU/Phys(131)**
 1. Burhan Zamir and Rashid Ali. The magnetostatic surface waves in a layered (Dielectric/Magnetic/Conducting)waveguide structure, Journal of Natural Science and Mathematics, 47, Nos. 1&2,11-23 (2007)
 2. Muhammad Najam Shaikh and Rashid Ali. Coupled Alfvén-Spin wave in a composite magnetic-semiconducting medium.Chinese Journal of Physics, 47, No. 3, 336 (2009)
 3. Muhammad Najam Shaikh, H.A. Shah and Uzma Noureen Chaudhary and Rashid Ali. Coupled nonlinear waves in a composite magnetic-semiconducting medium.Physics Letters A, 374, 2942 (2010)

Burhan Zamir and Rashid Ali. Wave propagation in parallel-plate waveguides filled with nonlinear left-handedMaterial. Chinese Physics B, Vol. 20, No.1(2011)

**SCIENCE CARAVAN EXHIBITIONS
ORGANIZED DURING 2009-10**

ANNEXURE-V**SCIENCE CARAVAN EXHIBITIONS ORGANIZED DURING 2009-10****Federal Unit:**

Exhibition Sites	Dates	No. of Days	No. of Schools	No. of Students
International Environment Expo at Islamabad Model College for Girls, F-7/4, Islamabad	02.10.2009 to 16.10.2009	15	50	10,000
International Environment Expo at Govt. Post Graduate College, Abbotabad	18.10.2009 to 21.10.2009	4	-	-
International Environment Expo at Sukkur	10.11.2009 to 24.11.2009	15	42	8,000
International Environment Expo at Multan	03.12.2009 to 16.12.2009	14	30	5,000
Science Caravan Exhibition at Capital Science School, Islamabad	26.04.2010 to 30.04.2010	5	19	2,500
Science Caravan Exhibition at Govt. Higher Secondary School, Lora Distt. Abbottabad.	20.05.2010 to 31.05.2010	12	25	5,000
	Total:	65	166	30,500

Punjab Unit:

Science Caravan (Federal unit) and Punjab Unit, International Environment Expo at Islamabad Model College for Girls, F-7/4, Islamabad	2.10.2009 to 07.10.2009	6	-	-
Science Caravan Exhibition Webster High School, Faisalabad	19.10.2009 to 23.10.2009	6	12	1,250
Science Caravan Exhibition at University of Agriculture, Faisalabad (Kissan Mela)	20.10.2009 to 23.10.2009	5	-	2,200
Science Caravan Exhibition Faisalabad (Science Centre) (World Science Day)	10.11.2009	1	6	650
Science Caravan Exhibition Govt. High School Warburton City Distt. Nankana Sahib	19.01.2010 to 30.01.2010	12	12	8,500
Science Exhibition at Bahria Foundation School & College, Faisalabad	08.02.2010 to 10.02.2010	6	8	1,000

Science Caravan (Federal unit) and Punjab Unit arranged International Environment Expo at Multan	03.12.2009 to 16.12.2009	14	30	5,000
	Total:	62	83	25,100
Sindh Unit:				
Science Exhibition at the High Schools (Boys)of Taluka Ghotki and Mirpur Mathelo, District Ghotki (Unit I)	17.08.2009 to 08.09.2009	23	5	1,400
Science Exhibition at the High Schools (Girls)of Taluka Ghotki and Mirpur Mathelo, District Ghotki (Unit II)	17.08.2009 to 08.09.2009	23	6	1,600
Science Exhibition at the High Schools of Taluka Gambat and Sobho-Dero Distt. Khairpur	09.10.09 to 21.10.09	13	13	3,000
Sindh & Federal units arranged International Environment Expo at Sukkur	10.11.2009 to 24.11.2009	15	42	8,000
Science Exhibition at Schools of Taluka Khohra City, Distt. Khairpur Mirs	22.2.2010 to 4.3.2010	11	11	2,800
Science Exhibition at Taluka Shahdad Kot and Nasirabad, District Kambar	05.04.2010 to 29.04.2010	25	18	4,576
Science Exhibition at Kamber and Warah, Sobho-Dero at Ranipur, Khairpur Mirs	05.04.2010 to 29.04.2010	25	23	5,574
Science Exhibition at Sobo-Dero at Ranipur Distrcit Khairpur Mirs	24.05.2010 to 31.05.2010	08	10	2,000
	Total:	143	128	28,950
KPK Unit:				
Educational Activities in IDP's Camps Peshawar	10.07.2009 to 20.07.2009	11	11	1,993
Science Exhibition at Govt. High School, Mohri Bedbhan, Distt. Abbottabad	10.08.2009 to 21.08.2009	11	12	707
International Environment Expo at Govt. Post Graduate College, Abbotabad	18.10.2009 to 22.10.2009	05	-	-

Actively Pak Turk Internationals & College Hayatabad	06.01.2010 to 16.01.2010	11	10	1,190
Science Exhibition at Working Folks Grammar School, Distt.Mardan	17.02.2010 to 28.02.2010	12	12	1,235
Science Exhibition at Govt. Higher Secondary School Chamber, Distt, Mardan	01.03.2010 to 09.03.2010	09	09	1,184
Science Exhibition at Army Public School & College Warsak Road, Peshawar Cantt	10.03.2010 to 12.03.2010	03	03	1,149
Science Exhibition at Govt. Higher Secondary School Pabbi, Nowshera	15.04.2010 to 29.04.2010	15	28	2,391
Science Exhibition at Khalil Mohmand Cambridge School & College Badaber Distt. Peshawar	03.05.2010 to 11.05.2010	09	08	948
Science Exhibition at GCMHS Battagram	02.06.2010 to 16.06.2010	09	10	948
Govt. High School, Banna Alia	17.06.2010 to 30.06.2010	14	19	1,527
	Total:	109	122	13,272

Balochistan Unit:

Science Exhibition at Schools of Distt. Zhob	06.07.2009 to 21.07.2009	16	10	2,000
Science Exhibition at Govt. High School Khanozai Distt. Pishin	12.10.2009 to 21.10.2009	10	08	2,180
Science Exhibition at School of Distt. Sibi Balochistan	13.2.2010 to 15.2.2010.	to 03	06	1,000
Science Exhibition at the Schools (Boys/Girls) of Bostan Distt. Pishin	16.05.2010 to 15.06.2010	31	16	5,500
	Total:	60	30	680
	Grand total::	439	539	108,502

**LIST OF WINNER STUDENTS OF
19TH INTRA BOARD SCIENCE ESSAY
COMPETITION: THEME: “SCIENCE &
ISLAM”**

ANNEXURE-VI

LIST OF WINNER STUDENTS OF 19TH INTRA BOARD SCIENCE ESSAY COMPETITION

THEME:-“SCIENCE & ISLAM”

Sr. #	Name of the winner students	Name and Address of School	Position	Amount
Urdu Language				
1	BISE BANNU			
1	Gohar Nayab	Knowledge Public High School, Laki Marwat	2 nd	Rs.3,000/-
2	Badi ud Din	Shaheen Public School, Laki Marwat	3 rd	Rs.2,000/-
2	BISE FAISALABAD			
1	Nadia Muzaffar	Govt. M.C. Girls Additional High School No.2, Faisalabad	1 st	Rs.5,000/-
2	Aamir Mujtaba	Govt. Comprehensive Model High School, Jhang, Saddar	2 nd	Rs.3,000/-
3	Mutiur Rehman	Laboratory Girls High School, Agricultural University, Faisalabad	3 rd	Rs.2,000/-
3	BISE ABBOTTABAD			
1	Abdul Waheed	HGSS No. 1, Haripur	3 rd	Rs.2,000/-
4	BISE KOHAT			
1	Muhammad Shah Din	GHS Surdog, Karak	1 st	Rs.5,000/-
5	BISE KARACHI			
1	Hafiza Aisha Iqbal	Iqra Huffaz Girls Sec. School,40 Al- hamra Society, Tipu Sultan Road, Karachi	1 st	Rs.5,000/-
2	Maria Kulsoom	P.N.Model School (Majeed SRE), Karachi	2 nd	Rs.3,000/-

3	Sakina	B.M.B. Toddlers Girls Sec. School, Karachi	3 rd	Rs.2,000/-
6 BISE SARGODHA				
	Anam Akbar	Govt. Comprehensive Girls High School Sargodha	1 st	Rs.5,000/-
2	Mehnoor	Govt. Girls Pilot Secondary School, Sargodha	2 nd	Rs.3,000/-
3	Amna Bibi	Govt. Girls High School Chheena, Bahkkar	3 rd	Rs.2,000/-
7 BISE MARDAN				
	Muhammad Tayyib	Iqra School & College Hoti, Mardan	1 st	Rs.5,000/-
2	Younas	GHS Maini, Teh. Topi, Swabi	2 nd	Rs.3,000/-
3	Arsalan	Bright Future School Shamsi Road, Mardan	3 rd	Rs.2,000/-
8 FBISE ISLAMABAD				
1	Maria Shahzadi	F.G. Girls High School Gujranwala Cantt	2 nd	Rs.3,000/-
2	Hafiza Maria Yousaf	F.G. Girls High School No.8, Ilaha Rukh, Wah Cantt	3 rd	Rs.2,000/-
9 BISE HYDERABAD				
1	Faiza	Govt. Apwa Girls High School Latifabad, Hyderabad	1 st	Rs.5,000/-
2	Maham Khan	Govt. Girls H/S Court Road Nawabshah	2 nd	Rs.3,000/-
3	Cadet Yasir Ali	Cadet College Petaro	3 rd	Rs.2,000/-

10 BISE RAWALPINDI

1	Salma Nosheen	Fauji Foundation Higher Sec. School (Inter College) Talagang, Chakwal	1 st	Rs.5,000/-
2	Syed Ali Momin	-do-	2 nd	Rs.3,000/-

11 BISE GUJRANWALA

1	Sana Khalid	Jamia-tul-Binat High School Model Town, Gujranwala	2 nd	Rs.3,000/-
2	Abu Bakar Iftikhar	Quaid-e-Azam Divisional Public School & College, Gujranwala	3 rd	Rs.2,000/-

12 BISE LAHORE

1	Fazila Ghaffar	Govt. Girls High School 32/2-I, Okara	1 st	Rs.5,000/-
2	Sidra Mustafa	Wapda Girls High School, Shalimar Township, Lahore	2 nd	Rs.3,000/-
3	Dania Butt	The Punjab Township Lahore	3 rd	Rs.2,000/-

English Language Essays**1. BISE Bannu**

Sr. #	Name of the winner students	Name and Address of School	Position	Amount
1	Ansara Bibi	GGHSS S.K. Bala, Bannu	1 st	Rs.5,000/-

2. BISE Abbottabad

1	Maria Altaf	Khyber PS & College Mansehra	1 st	Rs.5,000/-
2	Mahroona Ali Syed	Khyber PS & College Mansehra	2 nd	Rs.3,000/-

3. BISE Kohat

1	Abdus Saboor	Garrison Cadet College, Kohat	1 st	Rs.5,000/-
---	--------------	-------------------------------	-----------------	------------

2	Sana Safdar	GGHS No. 1, Kohat	2 nd	Rs.3,000/-
3	Muhammad Hamza Malik	Garrison Cadet College, Kohat	2 nd	Rs.3,000/-
4	Abdul Mussawir	GHS Takht-e-Nasrati, Karak	3 rd	Rs.2,000/-
4. BISE Karachi				
1	M. Raffay Maqbool	Customs Public School, 29-C, Block 6, P.E.C.H.S, Shahrah-e-Faisal, Karachi	1 st	Rs.5,000/-
2	Alia Mahmood	Metropolis Girls School, C-43, Block 13, F.B. Area,(Campus-III), Karachi	2 nd	Rs.3,000/-
3	Sidra Akram Hasan	Merit "N" Merit School,C-2, Commissioner Society, Mian A.H.I Road, Gulshan-e-Iqbal, Karachi	3 rd	Rs.2,000/-
5. BISE Mardan				
1	Hamid Ikram	Iqra School & College Hoti, Mardan	1 st	Rs.5,000/-
2	Muhammad Zubair	Iqra School & College Hoti, Mardan	2 nd	Rs.3,000/-
3	Aysha Iqbal	Millat Public School Tordher, Swabi	3 rd	Rs.2,000/-
6. BISE Sukkur				
1	Abdul Ghaffar	Star Grammar Higher Secondary, Naushahro Feroze	1 st	Rs.5,000/-
2	Bisma Shaikh	Govt. Girls Higher Secondary School, Khairpur	2 nd	Rs.3,000/-
3	Asia Lashari Baloch	Mari Gas Higher Secondary School, Daharki	3 rd	Rs.2,000/-
7. BISE Larkana				
1	Mohammad Hassan Siddiqui	Cadet College, Larkana	1 st	Rs.5000/-
2	Samia Naz	Govt. English Medium Model High School, Larkana	2 nd	Rs.3000/-

8. FBISE Islamabad

1	Maimoona Maqbool	Fazaia Inter College, Minhas Kamra	1 st	Rs.5000/-
---	------------------	------------------------------------	-----------------	-----------

9. BISE Hyderabad

1	Sadia Sehar	Army Public School Thatta	1 st	Rs.5000/-
---	-------------	---------------------------	-----------------	-----------

2	Majida Noorani	Govt. Girls H/S Court Road Nawabshah	2 nd	Rs.3000/-
---	----------------	---	-----------------	-----------

3	Iqra Anwar	Fauji Foundation Model High School, Hyderabad	3 rd	Rs.2000/-
---	------------	--	-----------------	-----------

10. BISE Rawalpindi

1	Rabia Zaheer	Divisional Public School & College, Murree Road, Rawalpindi	3 rd	Rs.2,000/-
---	--------------	--	-----------------	------------

11. BISE Gujranwala

1	Qurat-ul-Ain Syed	Wisdom Girls High School Channan Gujarat	1 st	Rs.5,000/-
---	-------------------	---	-----------------	------------

12. BISE LAHORE

2	Rana Tauqeer Hasan	The Trust School, Amer Town Harbanspura, Lahore	1 st	Rs.5,000/-
---	--------------------	--	-----------------	------------

3	Maria Manzoor	Laurel Bank Public School, G.T. Road, Lahore	2 nd	Rs.3,000/-
---	---------------	---	-----------------	------------

4	Amna Sulehri	Nova High School 1429 Tufail Road, Lahore Cantt	3 rd	Rs.2,000/-
---	--------------	--	-----------------	------------

SINDHI LANGUAGE ESSAYS**1. BISE Karachi**

1	Irfan Kareem	Customs Public School, 29-C, Block 6, P.E.C.H.S, Shahrah-e-Faisal, Karachi	1 st	Rs.5,000/-
---	--------------	--	-----------------	------------

2	Urooj Hussain	Metropolis Girls School, C-43, Block 13, F.B. Area,(Campus-III), Karachi	2 nd	Rs.3,000/-
3	Zulkifl Ahmed	Citizens Public Sec. School, (P.I.D.C), Karachi	3 rd	Rs.2,000/-
2. BISE Larkana				
1	Sabira	Govt. English Medium Model High School, Larkana	3 rd	Rs.2,000/-
3. BISE Hyderabad				
1	Nauroz Ali Brohi	Noor-ul-Islam High School, Tando Mohd Khan	1 st	Rs.5,000/-
2	Atia Khalid	Happy Home High School, Kotri	2 nd	Rs.3,000/-
3	Shahzeb	Darul-uloom High School, Tando Mohd Khan	3 rd	Rs.2,000/-

LIST OF 19TH INTER BOARD SCIENCE ESSAY COMPETITION

SINDHI LANGUAGE ESSAY

1	Atia Khalid	Happy Home High School, Kotri	1 st	Rs.10,000/-
2	Nauroz Ali Brohi	Noor-ul-Islam High School, Tando Mohd Khan	2 nd	Rs.6,000/-
3	Irfan Kareem	Customs Public School, 29-C, Block 6, P.E.C.H.S, Shahrah-e- Faisal, Karachi	3 rd	Rs.4,000/-

URDU LANGUAGE ESSAY

1	Anam Akbar	Govt. Comprehensive Girls High School, Sargodha	1 st	Rs.10,000/-
2	Mahroona Ali Syed	Khyber PS & College, Mansehra	2 nd	Rs.6,000/-
3	Aamir Mujtaba	Govt. Comprehensive Model High School, Jhang, Saddar	3 rd	Rs.4,000/-

ENGLISH LANGUAGE ESSAY

1	Sadia Sehar	Army Public School Thatta	1 st	Rs.10,000/-
2	Mahroona Ali Syed	Khyber PS & College Mansehra	2 nd	Rs.6,000/-
3	Maria Manzoor	Laurel Bank Public School, G.T. Road, Lahore	3 rd	Rs.4,000/-

ANNEXURE-VII

**LIST OF WINNER STUDENTS OF 19TH INTRA BOARD SCIENCE POSTER
COMPETITION**

THEME:-“FUEL RESOURCES IN THE 21ST CENTURY”

Sr. No	Name of the winner students	Name and Address of School	Position	Amount
1. BISE BANNU				
1	Muhammad Fawad	Fouji Foundation Model School, Bannu	1 st	Rs.5,000/-
2	Jalal Nawaz	Fouji Foundation Model School, Bannu	2 nd	Rs.3,000/-
3	Miss Rahmayin	GGHSS S.K. Bala, Bannu	3 rd	Rs.2,000/-
2. BISE FAISALABAD				
1	Muhammad Kazim Nawaz	Govt. Comprehensive Model High School, Jhang, Saddar	1 st	Rs.5,000/-
2	Iqra Kabir Khan	Sacred Heart Girls High School, Jhang	2 nd	Rs.3,000/-
3	Aysha Aslam	Laboratory Girls High School, Agricultural University, Faisalabad	3 rd	Rs.,2000/-
3. BISE ABBOTTABAD				
1	Qurat-ul-Ain Jamil	Hazara PS & College, Haripur	1 st	Rs.5,000/-
2	Sundas Rafaqat	Al Imtiaz Academy, Abbottabad	2 nd	Rs.3,000/-
3	Anum Naeem	Pine Hills Girls School & College, Abbottabad	3 rd	Rs.2,000/-
4. BISE KOHAT				
1	Kashif Mushtaq	Garrison Cadet College, Kohat	1 st	Rs.5,000/-
2	Iqtidar Hussain	GHS Kirman, Kurram Agency	2 nd	Rs.3,000/-

3	Ghazali Abbas	Garrison Cadet College, Kohat	2 nd	Rs.2,000/-
5. BISE KARACHI				
1	Urooj Bhatti	Hamdard Public School, Madinatal Hikmah Muhammad Bin Qasim Avenue, Karachi	1 st	Rs.5000/-
2	Rabbiya Rizwan Karim	Falcon house Grammar School, Campus-V, E-6, Block-F, North Nazimabad, Karachi	2 nd	Rs.3000/-
3	Abdul Rehman	Iqra Huffaz Boys Sec. School, St 2/1,Block T, North Nazimabad, Karachi	3 rd	Rs.2,000/-
6. BISE SARGODHA				
	Shaista Noreen	Govt. Comprehensive Girls High School Sargodha	1 st	Rs.5,000/-
2	Kinza Ejaz	Divisional Public School/College Sargodha	2 nd	Rs.3,000/-
3	Rehana Mehmood Niazi	Govt. Girls Higher Sec. School, Kundian, Mianwali	3 rd	Rs.2000/-
7. BISE MARDAN				
1	Waleed Khalid	Saint Andrew's School System Bagh-e- Irum, Mardan	1 st	Rs.5,000/-
2	Zainab Qureshi	Working Folks Grammar School, Amangarh, Nowshera	2 nd	Rs.3,000/-
3	Husn-ul-Maab	Fauji Foundation Model School, Mardan	3 rd	Rs.2000/-
4	Fawad-ur-Rehman	Working Folks Grammar School, Amangarh, Nowshera	3 rd	Rs.2,000/-

**LIST OF WINNER STUDENTS OF
19TH INTRA BOARD SCIENCE POSTER
COMPETITION: THEME: “FUEL
RESOURCES IN THE 21ST CENTURY”**

8. BISE SUKKUR

1	Zahira Arain	Govt. Girls Higher Secondary School, Khairpur	1 st	Rs.5,000/-
2	Mahnoor Mangi	Mari Gas Higher Secondary School, Daharki	2 nd	Rs.3,000/-
3	Kulsoom Fatima	Govt. Girls High School, Sukkur	3 rd	Rs.2,000/-

9. BISE LARKANA

1	Lareb Khan	OPF Public School, Larkana	1 st	Rs.5,000/-
2	Shahid Ali	-do-	2 nd	Rs.3,000/-
3	Ali Mohsin	-do-	3 rd	Rs.2,000/-

10. FBISE ISLAMABAD

1	Saamreen Fatima	Fazaia Inter College, Chaklala, Rawalpindi	1 st	Rs.5,000/-
2	Rabbiya Nisar	Fauji Foundation College for Girls, New Lalazar, Rawalpindi	2 nd	Rs.3,000/-
3	Zubair Fazal	Kid City High School, Humak Islamabad	3 rd	Rs 2,000/-

11. BISE HYDERABAD

1	Mah Noor Mengal	Govt. Girls Model High School G.O.R Colony, Hyderabad	1 st	Rs.5,000/-
2	Tooba Ashfaquae Ansari	Kulsoom Boys/Girls High School Latifiabad No.9, Hyderabad	2 nd	Rs.3,000/-
3	Zeeshan Ahmed	Army Public School Makli Thatta	3 rd	Rs.2,000/-

12. BISE MULTAN

1	Mah Noor Tariq	Govt. Girls Comprehensive Higher Secondary School, Multan	1 st	Rs.5,000/-
2	Aamir Shahzad	Govt. Fazilka Islamia High School, Pakpattan	2 nd	Rs.3,000/-
3	Sara Malik	Govt. Girls Comprehensive Higher Secondary School, Multan	3 rd	Rs.2,000/-

13. BISE GUJRANWALA

1	Amara Imran	Allama Iqbal Public Girls High School, Sialkot Cantt	1 st	Rs.5,000/-
2	Khansa Ashraf	Govt. Girls Model High School, Satellite Town Gujranwala	2 nd	Rs.3,000/-
3	Anam Sumrina	Govt. Miss Fatima Jinnah M.B. Model Girls High School, Gujrat	3 rd	Rs.2,000/-

14. BISE RAWALPINDI

1	Nabeel Rahat	Divisional Public School and College, Murree Road, Rawalpindi	1 st	Rs.5,000/-
2	Zehra Mustafa	-do-	2 nd	Rs.3,000/-
3	Syed Muhammad Hasan	-do-	3 rd	Rs.2,000/-

15. BISE LAHORE

1	Farasat Mukhtar	Govt. Girls Higher Secondary School, Governor House, Lahore	1 st	Rs.5,000/-
2	Abdul Hannan	Ghulam Haider Grammer School System Renala Khurd, Okara	2 nd	Rs.3,000/-
3	Aqsa Imtiaz	Laurel Bank Public School, G.T. Road, Lahore	3 rd	Rs.2,000/-

LIST OF 19TH INTER BOARD SCIENCE POSTER COMPETITION

1	Rabbiya Rizwan Karim	Falcon House Grammar School Campus -5, E-6, block-F, North Nazimabad, Karachi	1 st
2	Waqas Sultan	Army Public School, Sargodha	2 nd
3	Arooj Bhatti	Hamdard Public School, Madinatul Hikmat, Muhammad Bin Qasim, Karachi.	3 rd
4	Nabeel Rahat	Divisional Public School, Sargodha	3 rd

**FINANCIAL ASSISTANCE TO SCHOOLS
FOR PURCHASE OF LAB EQUIPMENT**

ANNEXURE-VIII**FINANCIAL ASSISTANCE TO SCHOOLS FOR PURCHASE OF LAB. EQUIPMENT**

Sr. No	Name of Institute	Purpose/Activity	Amount
1.	Zahid Public Model School, Ghalegay Swat, NWFP	Purchase of Lab. Equipment	Rs.25,000/-
2	Govt. High School Shahkot, Distt. Nowsehra	Purchase of Lab. Equipment & Computers	Rs.50,000/-
3	Govt. Higher Secondary School Ziarat Ka Ka Sahib, Nowsehra	Purchase of Lab. Equipment	Rs.25,000/-
4	St. Joseph' Convent High School, Kohat Cantt	-do-	Rs.25,000/-
5	F.G. Boys Secondary School, Jhang Syedan, Islamabad	-do-	Rs.25,000/-
6	EMS High School, Main Campus No.33, St. NO.60, F-11/4, Islamabad	Purchase of Lab. Equipment & Computers	Rs.50,000/-
7	Private School Network, Islamabad For prize money	Purchase of Lab. Equipment	Rs.25,000/-
8	Kharan Public Model High School, Kharan , Balochistan	Purchase of Lab. Equipment & Computers	Rs.50,000/-
9.	Ideal Public Higher Secondary School Khuhra, Distt Khairpur	Purchase of Lab. Equipment	Rs.25,000/-
10.	F.G High School, Gulmat, Gojal	Purchase of Lab. Equipment & Computers	Rs.50,000/-
11.	DJ Middle School, Nazimabad Bala, Shiskat, The Gulmit	Purchase of Lab. Equipment	Rs.20,000/-
12	DJ Middle School, Nasirabad Lower Hunza Shinaki	-do-	Rs.20,000/-
13.	Cathedral School, Jalal Pur Jattan Gujrat	-do-	Rs.25,000/-
14.	Nasir-e-Khusrow Model High School, Ghulkin, Upper Hunza	-do-	Rs.20,000/-
15.	Islamia Grammar School, F-11/3, Islamabad	Purchase of Lab. Equipment & Computers	Rs.50,000/-

16.	Punjab Model School, Kausar Colony, Kot Lakhpat, Model Town, Lahore	-do-	Rs.25,000/-
17.	Muslim Public High School Dassu, Kohistan	-do-	Rs.25,000/-
18.	Govt. Girls Amrao Ali Khan Higher Secondary School, Roshan Bheela Kasur	-do-	Rs.25,000/-
19	The Hub School, Karachi.	-do-	Rs.350,000/-
	Total:		Rs.910,000.00