

XII PLAN

ONGOING ACTIVITIES/PROGRAMMES OF ICMR WHICH
NEED TO BE CONTINUED IN XII PLAN OR DISSOLVED
(DROPPED) FORTHWITH

Observations of the Committee

ONGOING ACTIVITIES/PROGRAM OF ICMR WHICH NEED TO BE CONTINUED IN XII PLAN OR DISSOLVED (DROPPED) FORTHWITH

The XI five year Plan ended on 31st March, 2012. During this period DHR was created in the year 2007 and ICMR became one of its activities. ICMR which was an apex organization of knowledge generation in the field of biomedical research started working synergistically with DHR which takes knowledge in to action for public health impact policies and programmes.

The activities of ICMR of the XI Plan that would spill over to XII Plan include, Centre of Excellence/Advanced Centres, task force programmes, investigator driven adhoc projects in intramural as well as extramural modes, etc. There were some long term projects/studies of national importance which were initiated long back and have been supporting the state health authorities and generating data which is being used by policy makers and programme managers. In addition to these there are programmes/activities such as human resource development, publication of journal, reports, infrastructure development, etc, which are essential and need to be continued. Besides above mentioned spill over activities there were many new studies proposed in identified priority areas of biomedical research as well as proposals for setting up of new centres in deficit and unexplored areas.

HPC as per the mandate reviewed the spill over activities of the XI plan of the 32 Institutes of the ICMR and of the technical divisions at the ICMR Hqrs, for their continuation in XII plan and suggested modifications for improvement and also recommended studies/programmes to be dropped. The programmes approved by the HPC are detailed below:

Programmes/Activities of ICMR Evaluated by the Committee

A total of 2185 spill-over extramural and intramural activities which were initiated during XI Plan and continuing in XII Plan were evaluated. HPC in the process also reviewed 2271 completed programmes/activities during XI Plan, and 2300 new/programmes/activities proposed by the ICMR Institutes and Technical Divisions of the Hqrs for XII Plan (Table 10).

Table 10: Total Number of Programmes/Activities of ICMR evaluated by HPC			
Institutes/Divisions	Activities/Programmes		
	Completed during XI Plan	Ongoing i.e. Spill over from XI to XII Plan	New Proposals for XII Plan
All ICMR Institutes (Intramural Research)	667	412	800*
All ICMR Technical Divisions* (Extramural Research)	1604	1773	1500*
Total	2271	2185	2300*

*The figures given under this head for various columns indicate number of activities/area of research which include number of Task Forces, Centre of Excellence, Adhoc Projects, Fellowships Programmes etc. It should not be considered as number of Projects. * Numbers are tentative may fluctuate depending up on SAC Approval and availability of Funds.*

HPC noted that under various technical divisions of the ICMR Hqrs, over hundred programs (Annex 9) in the area of communicable diseases, non-communicable diseases, basic medical sciences, reproductive & child health, nutrition, etc are progressing and under these programs numbers of completed, ongoing and proposed studies as mentioned in the Table 10 were reviewed.

HPC noted that many of the committed projects which were sanctioned during XI Plan would complete their sanctioned duration during the XII Plan (*spill-over projects*) hence will have to continue to fulfil the mandate and objectives of the study.

HPC also noted that there are *core obligatory activities* which are long term/in continuum and some entrusted by the Governments to the ICMR Institutes in relation to surveillance, disease surveys etc which will have to be continued.

Spill-over activities for Continuation

A. Extramural Research

HPC recommended the following for continuation:

1. Centres for Advanced Research: A total of 12 Centres for Advanced Research were initiated during XI Plan which are continuing and will require a budget of Rs 3585 lakhs (Rs. 35.85 Cr) to complete its remaining activities during the XII plan (Table 11).

Table 11: Centres for Advanced Research (Started during XI Plan and will spill over to XII Plan)							
Divisions	No. Ongoing CAR in XII Plan	Total Funds Required (Rs in lakhs)					
		2012-13	2013-14	2014-15	2015-16	2016-17	Total
NCD	1	113 (1)	110 (1)	110 (1)	-	-	333
BMS	9	1095 (9)	600 (6)	190 (4)	190 (4)	190 (4)	2265
RCH	1	245 (1)	279 (1)	279 (1)	-	-	803
Nutrition	1	34 (1)	36 (1)	38 (1)	40 (1)	36 (1)	184
Total	12	1487 (12)	1025 (9)	617 (7)	230 (5)	226 (5)	3585

Figures in parenthesis are the number of Advanced Centres continuing in different years

2. Task Forces: A total of 180 specific task force projects were initiated during XI Plan which will extend to various financial years in the XII Plan and will require a budget of Rs 9269 lakhs (Rs. 92.69 Cr) to complete its remaining activities during the XII plan (Table 12).

Table 12: Task Force Projects (Started during XI Plan and will spill over to XII Plan)							
Divisions	No's of Ongoing Task Force Projects in XII Plan	Funds Required (Rs in lakhs)					
		2012-13	2013-14	2014-15	2015-16	2016-17	Total
ECD	97	2063 (97)	1553 (73)	595 (28)	85 (4)	85 (4)	4381
NCD	35	785 (35)	320 (22)	160 (12)	-	-	1265
BMS	23	560 (23)	178 (14)	107 (1)	-	-	845
RCH	15	343 (15)	329 (12)	282 (3)	183 (2)	37 (1)	1174
HSR	2	220 (2)	224 (2)	-	-	-	444
MPU	7	205 (7)	197 (7)	220 (6)	229 (6)	231 (3)	1082
P& I	1	36 (1)	23 (1)	19 (1)	-	-	78
Total	180	4212 (180)	2824 (131)	1383 (51)	497 (12)	353 (8)	9269

Figures in parenthesis are the number of Task Force Projects continuing in different years

3. Adhoc Projects: A total of 793 adhoc projects were initiated during XI Plan which are continuing and will require a budget of Rs 12089 lakhs (Rs 120.89 Cr) to complete its approved work during different years of XII plan (Table 13)

Table 13: Adhoc Projects (Started during XI Plan and will spill over to XII Plan)							
Divisions	No of Ongoing Adhoc Projects in XII Plan	Funds Required (Rs in lakhs)					
		2012-13	2013-14	2014-15	2015-16	2016-17	Total
ECD	217	1535 (217)	813 (115)	290 (41)	-	-	2638
NCD	117	970 (117)	580 (72)	180 (25)	-	-	1730
BMS	308	1962 (308)	1930 (195)	962 (68)	188 (9)	-	5042
RCH	91	771 (91)	606 (82)	303 (45)	-	-	1680
Nutrition	18	144 (18)	54 (10)	21 (8)	-	-	219
BIC	9	147 (9)	64 (9)	62 (9)	6 (2)	-	279
HSR	18	150 (18)	136 (18)	20 (3)	-	-	306
SBR	9	40 (9)	15 (2)	-	-	-	55
MPU	1	28 (1)	21 (1)	-	-	-	49
P&I	2	21 (2)	16 (2)	16 (2)	-	-	53
IPR	2	7 (2)	12 (2)	-	-	-	19
IHD	1	11 (1)	8 (1)	-	-	-	19
Total	793	5786 (793)	4255 (509)	1854 (201)	194 (11)	-	12089

Figures in parenthesis are the number of Adhoc Projects continuing in different years

4. Research Fellowships: A total of 670 research fellowships were initiated during XI Plan which are continuing and will require a budget of Rs 4190 lakhs (Rs. 41.90 Cr) to complete its remaining activities during the XII plan (Table 14).

Table 14: Fellowships started during XI Plan and will spill over to XII Plan							
Divisions	No's of Ongoing Fellowships in XII Plan	Funds Required (Rs in lakhs)					
		2012-13	2013-14	2014-15	2015-16	2016-17	Total
ECD	120	260 (120)	149 (69)	67 (31)	-	-	476
NCD	123	265 (123)	140 (85)	-	-	-	405
BMS	302	1295 (302)	586 (209)	299 (85)	74 (13)	-	2254
RCH	40	201 (40)	99 (19)	42 (8)	-	-	342
Nutrition	41	104 (41)	63 (28)	48 (16)	-	-	215
BIC	20	58 (20)	58 (20)	58 (20)	20 (7)	-	194
SBR	1	3 (1)	1 (1)	-	-	-	4
IHD	23	30 (23)	60 (23)	65 (23)	70 (23)	75 (23)	300
Total	670	2216 (670)	1156 (454)	579 (183)	164 (43)	75 (23)	4190

Figures in parenthesis are the number of Fellowships continuing in different years.

5. Long-Term Network Programmes for Vector Control, Nutrition and Reproductive Health: HPC also observed that many of the long term projects at various ICMR Institutes viz. Integrated Disease Vector Control (IDVC), JE Project in South Arcot district, Tamil Nadu, National Nutrition Monitoring Bureau (NNMB), Malaria Parasite Bank and Human Reproductive Research Centres (HRRCs) also need to be continued for the benefit of the common man, and accelerating the research environment in the country (Table 15).

Table 15: Long term projects of ICMR to be continued in XII plan						
Long Term Projects	Rs in lakhs					
	2012-13	2013-14	2014-15	2015-16	2016-17	Total
IDVC (10)	1120	1232	1355	1490	1639	6836
NNMB (16)	900	990	1089	1198	1318	5495
HRRC (31)	940	1050	1200	1320	1450	5960
NCRP (1)	395	435	478	526	578	2412
JE Project (1)	35	39	42	47	51	214
Malaria Parasite Bank (1)	17	19	21	23	25	105
Total	3407	3765	4185	4604	5061	21022

IDVC-Integrated Disease Vector Control; NNMB-National Nutrition Monitoring Bureau; HRRC-Human Reproductive Research Centres; JE-Japanese Encephalitis, NCRP- National Cancer Registry Programme

6. Other Essential Extramural Activities: A total of 112 other activities are ongoing in different divisions of the ICMR, which will require a budget of Rs. 10432 lakhs (Rs. 104.32 Cr) (Table 16)

Table 16: Ongoing essential activities of the Hqrs Division (Started during XI Plan and will spill over to XII Plan)

Divisions	Ongoing Major Programmes in XII Plan	Targets (Rs in lakhs) (Nos)/ Funds Required					
		2012-13	2013-14	2014-15	2015-16	2016-17	Total
ECD	1 Tribal health (21)	108 (21)	132* (14)	75 (8)	-	-	315
	2 VDL (13)	513 (13)	513 (13)	513 (13)	355 (9)	237 (6)	2131
	3. NER projects (7)	114 (7)	37 (5)	-	-	-	151
NCD	1. NER Projects (5)	350 (5)	220 (3)	40 (1)	-	-	610
BMS	1. Cochrane Library (1)	76 (1)	64 (1)	69 (1)	74 (1)	-	283
RCH	1. National Registry of ART Clinics in India	6 (1)	31 (1)	34 (1)	37 (1)	41 (1)	204
	2. Effects of Non-ionizing Electro Magnetic Field (EMF) on Human Health	98 (1)	107 (1)	118 (1)	-	-	323
	3. Fabrication of solar powered portable culture incubator	3 (1)	20 (1)	12 (1)	-	-	35
	4. Solar powered radiant baby warmer	5 (1)	73 (1)	28 (1)	-	-	106
	5. NER Projects (28)	120 (28)	45 (8)	18 (2)	18 (1)	-	201
Nutrition	2	500 (2)	550 (2)	605 (2)	665 (2)	270 (1)	2590
BIC	3	180 (3)	200 (3)	220 (3)	240 (3)	260 (3)	1100
P&I	4	168 (4)	203 (4)	241 (4)	285 (4)	338 (4)	1235
IPR	1	13 (1)	54 (1)	-	-	-	67
IHD	23 (18MOU + 5 Prog)	151 (23)	215 (23)	225 (23)	240 (23)	250 (23)	1081
Total	112	2460 (112)	2464 (81)	2198 (61)	1914 (44)	1396 (38)	10432

* Equipments will be purchased during 2013-14.

B. Intramural Research

Intramural research is being carried out by scientists of 32 institutes/centres and more than 70 field stations of the ICMR. These institutes/centres undertake disease specific or region specific research. They also provide technical support to their respective state government and coordinate with the National Health Programmes. They are also involved in many

statutory activities such as epidemic/outbreak investigations, diseases surveillance and disease burden studies. Many of the spill over activities of the institutes are statutory in nature. Furthermore, the institutes need to be strengthened in terms of infrastructure and human resource development.

Intramural Research Projects: The HPC noted that more than 400 intramural projects in different ICMR Institutes are ongoing satisfactorily and being monitored through SAC system. They have to be continued to achieve their objectives (Table 17).

Table 17: Number of ongoing Intramural Projects that need to be continued in to XII Plan	
Divisions/Institute	Total No of Projects
ECD (14 Institutes)	271
NCD (4 Institutes)	56
BMS (3 Institutes)	20
RCH+Nutrition (2 Institutes)	65
Total	412

ECD: Epidemiology & Communicable Diseases, NCD: Non-Communicable Diseases, BMS: Basic Medical Sciences, RCH: Reproductive and Child Health

HPC reviewed these projects and many of these projects after discussion in the HPC meetings were modified, focused, integrated (grouped) and several recommended for termination (Table 21)

A budget of Rs. 360.91 Crores would be required to complete the spill over research activities of the ICMR Institutes/Centres including intramural research projects (Table 18).

Table 18. Institute wise (intramural) spill over budgetary requirement in XII Plan		
Sr. No.	Institutes	Spill over budgetary requirement in 12th Plan (Rs in Crores)
1	CRME, Madurai	3.10
2	DMRC, Jodhpur	0.10
3	EVRC, Mumbai	7.15
4	FDTRC, Hyderabad	3.6
5	GRC, Mumbai	4.0
6	ICMR Virus Unit, Kolkata	3.2
7	ICPO, Noida	1.5
8	MCC, Pune	3.5
9	NARI, Pune	53.0
10	NCLAS, Hyderabad	1.0
11	NICED, Kolkata	47.43
12	NIE, Chennai	20.31
13	NIIH, Mumbai	5.4
14	NIMR, New Delhi	45.04
15	NIMS, New Delhi	4.7
16	NIN, Hyderabad	8.5
17	NIOH, Ahmedabad	1.02
18	NIOP, New Delhi	4.2
19	NIRRH, Mumbai	11.33
20	NIRT, Chennai	21.0
21	NIV, Pune	69.44

Contd...

Sr. No.	Institutes	Spill over budgetary requirement in 12 th Plan (Rs in Crores)
22	NJIL & OMD, Agra	8.2
23	RMRC, Belgaum	1.45
24	RMRC, Bhubaneswar	2.95
25	RMRC, Dibrugarh	1.0
26	RMRCT, Jabalpur	9.42
27	RMRC, Port Blair	6.27
28	RMRIMS, Patna	9.0
29	VCRC, Puducherry	4.1
	Total	360.91

(Budget Required Rs. 360.91 Crores)

CRORE OBLIGATORY ACTIVITIES

1. Human Resource Development for promoting Biomedical Research: HPC observed that ICMR is also involved in capacity building by awarding fellowships/awards and prizes etc (Table 19) which is core continuing activity and will require a budget of Rs 8670 lakh (Rs 86.70 Crores).

Table 19: Core obligatory HRD activities which will be continued in XII Plan						
Activities of HRD	Funds Required (Rs. in Lakhs)					
	2012-13	2013-14	2014-15	2015-16	2016-17	Total
JRF (150)	450	450	450	450	450	2250
MD-Ph.D (25)	181	181	181	181	181	905
Non-ICMR Scientist (TG)	250	250	250	250	250	1250
MD/MS/DM/MCH (50)	13	13	13	13	13	65
PDF (50)	425	425	425	425	425	2125
Seminar/Symposia/Workshops	315	315	315	315	315	1575
Awards & Prizes	100	100	100	100	100	500
Total	1734	1734	1734	1734	1734	8670

HPC appreciated the efforts of ICMR in promoting Human Resource Development for biomedical research and recommended progressive enhancement of the numbers of the available fellowships from 150 to 500.

2. International Health: HPC noted the international Collaboration of ICMR:

- Supporting delegations to various bilateral/multilateral discussions and Joint Working Groups (JWGs)
- International collaboration through workshops and other training programmes.

(Budget in XI Plan: 6.11 Cr, Proposed Budget for XII Plan: 10.81 Cr)

3. Translational Research/IPR:

- Many of the leads originated from the research of the ICMR have to be transferred to Industry for commercialization for the benefit of the end users.
- Total 30 Technologies (diagnosis of diabetes mellitus, TB, Leprosy, Chlamydia, Vector Control Methods etc) have reached advanced stage of development (Annex 10).

- Intellectual Property Rights Management: Activities in respect of identifying, protecting and commercializing of IP generated by ICMR supported research would be continued and strengthened.

HPC noted that this effort of ICMR is the need of the hour and requires further strengthening:

(Budget in XI Plan: 1.10 Cr, Proposed Budget for XII Plan: 2.00 Cr)

4. Research Communication

- Publication, information, communication and extension related activities will be continued and strengthened.
- The flagship journal of the ICMR *The Indian Journal of Medical Research (IJMR)*, *ICMR Bulletin*, *ICMR Patrika*, Annual Reports of the ICMR, DHR and other documents, books, ICMR Library and Information services network, will have to be continued and strengthened.
- Online Web-based Project Submission and Processing Management System: It has to be strengthened. This will also be linked up with financial module for quick processing and bring transparency.
- Promotion & Guidance on Research Governance Issues: Guidelines and Bills such as ethical guidelines, guideline on stem cell research, guidelines on Assisted Reproductive Technologies (ART), etc developed will have to be revised and updated from time to time. In addition new guidelines like those for use of nano-technology for health care, tissue engineering and other emerging technologies will have to be produced.

HPC appreciated that in recent years IJMR has significantly improved its impact factor being one of the highest among Indian scientific journals. HPC recommended that frequency of publication of IJMR should be increased.

(Budget in XI Plan: 12.30 Cr; Budget Proposed in XII Plan: 15.50 Cr)

5. Bioinformatics

- Established 20 Biomedical Informatics Centres of ICMR under second phase of the task-force 'Biomedical Informatics Centres of ICMR'. The mandate of Centres is to promote and support informatics in medical research.
- Development and maintenance of ICMR website. Everyday ICMR website is being visited by more than 17,000 visitors.
- Providing Internet, email, antivirus and video conferencing services to the Council and ICMR Research Institute.
- Maintaining database of scientific profiles of Intramural Scientists, adhoc projects, task-force, fellowships, etc.

(Budget XI Plan Rs. 18.0 Cr, Proposed Budget XII Plan: Rs. 61.0 Cr)

(Total Budget Required for Core Obligatory Activities: Rs. 176.01 Crores)

C. Capital Work

- Ongoing capital work at various ICMR Institutes like up-gradation of laboratories, hostel and guest house, building of animal houses, staff quarters, boundary walls, training centre at ROHC (E), renovation of NIOP building, NCPBR, Sasunavghar, fire safety, dedicated power line etc have to be continued (Table 20).

(Budget Rs. 412.22 Crores)

Table 20. Requirement of capital budget for ongoing works during XII Plan (Rs. in lakhs)

Sr. No.	Name of Institute	Approved cost of the projects	Amount released till 2011-12	Amount Required in XII Plan			
				2012-13 (released)	2013-14	2014-15	Total
1.	NJIL&OMD, Agra	130	45	-	85	-	85
2.	NIOH, Ahmedabad	4353	2795	735	534	28	1297
3.	RMRC, Bhubneshwar	110	45	55	-	-	55
4.	NIN & NCLAS, Hyderabad	2933	2294	173	517	-	690
5.	NICED, Kolkata	95	-	25	50	-	75
6.	RMRC, Belgaum	18	14	4	-	-	4
7.	NIMR, Delhi	1220	750	-	-	471	471
8.	ICPO, Noida	628	200	-	200	229	429
9.	NIOH, Delhi	484	445	39	-	-	39
10.	DMRC, Jodhpur	455	150	150	156	-	306
11.	MCC, Pune BSL-4 & other work	2629	2615	15	1200	-	1215
12.	RMRC, Port Blair	71	25	-	46	-	46
13.	VCRC, Puducherry	6	4	2	-	-	2
14.	RMRIMS, Patna	7149	2955	1110	1620	1465	4195
15.	ICMR Hqrs.	5093	100	-	1500	2000	3500
16.	NIRRH, Mumbai	30500	1500	-	17900	10700	28600
17.	RMRC, Dibrugarh (NE)	629	423	107	106	-	213
	Grand Total	56503	14360	2415	23914	14893	41222

Overall Expenditure on spill over Activities

Initial budget proposed to complete the various ongoing intramural, extramural, capital work and core obligatory activities was Rs. 2012 crores. However, after the HPC intervention resulting in pruning, modification and convergence of various disease specific programmes the revised budget required would be Rs. 1555.01 crores, resulting in reduction of Rs. 456.99 crores. Break-up of budget is mentioned below:

Initially Projected	Intramural Research	1000 Crores
	Extramural Research	600 Crores
	Capital Work	412 Crores
	Total	2012 Crores

Revised Budget after pruning, Development of condensed/synergised programs on different diseases

Intramural	536.92 Crores (360.91+176.01)
Extramural	605.87 crores (35.85+92.69+120.89+41.90+104.32+210.22)
Capital work	412.22 Crores
Total	1555.01 Crores

Final Requirements for ongoing Activities = Rs. 1555.01 Crores

Reduction: Rs. 456.99 Crores

Observations of the Committee (HPC) to each term of Reference

(i) ***Whether the ongoing schemes of the XI Plan need to be continued in XII Plan or dissolved forthwith;***

HPC evaluated the major activities/programmes/studies of all the ICMR Institutes and technical divisions of the ICMR Hqrs followed by elaborate in person discussions with the Directors/Scientists of the Institutes and Heads/Scientists of the Technical Divisions of the ICMR Hqrs in 6 meetings of the HPC held during December, 2012 to March, 2013.

Observations of the HPC are listed below:

Extramural Programmes: HPC observed that many of the already approved **ad hoc projects, task forces and fellowships** as well as centres for advanced research initiated in XI Plan will complete their term and objectives as per the sanctioned period sometime during the XII plan period and need to be continued to fulfill the mandate (Tables 11 to 14).

Long Term Projects: HPC noted that many of the long term projects which includes IDVC, NNMB, HRRC, repositories/biobanks, disease control programmes, etc would need to be continued for the benefit of the society, researchers and community to improve the ecosystem for Indian science (Table 15). There are other essential activities which need to be continued (Table 16).

Intramural Project: HPC reviewed over 400 ongoing intramural projects of ICMR institutes. Many of these projects after discussion in the HPC meetings were modified, focused, integrated (grouped) and several recommended for termination (Tables 17 & 21).

Human Resource Development/IEC Activities: HPC noted that many of the ICMR institutes and Technical Divisions of the Hqrs are engaged in high quality capacity building which needs to be continued and some further augmented (Table 19.).

Infrastructure Development: HPC noted that at many institutes of the ICMR capital work is ongoing and that needs to be continued to strengthen the infrastructure (Table 20).

Flagship Programmes: HPC noted with pleasure that many new initiatives started during XI Plan are of national importance and need to be further strengthened to increase outreach to the periphery with targeted benefit to the marginalized and underprivileged populations (*refer to page 39*)

National/International recognition/collaboration: HPC noted that many of the ICMR Institutes are nationally or globally recognized for health related expertise and are needed for the community. This activity needs to be continued for product development and their resultant use in the national programmes (*refer to page 26-29*).

The recommendations of HPC with respect to ongoing activities for its continuation or dropping them out are given in Table 21.

(ii) in case if they are to be continued then

(a) need for improvement

Synergy/Thematic/Disease specific (vector borne and other diseases) integrated research plan

Convergence and coordination for Disjointed Disease specific Programmes

- HPC noted that many ICMR institutes were working on common disease specific areas in different geographical locations and ethnic diversity. HPC advised a cohesive and coordinated approach to avoid duplication of efforts.
- On the recommendations of the HPC comprehensive, coordinated, focused, disease specific plans involving several ICMR institutes were prepared and approved (Annex 11-25)
- HPC also recommended to bring out the disease specific documents with current status, which would be helpful to the policy makers and programme managers and the lay public.

Research on Herbal Products

HPC recommended the discontinuation of exploratory & piece meal research related to Herbal Products being undertaken at various centres except where a promising lead has been found. HPC noted that RMRC, Belgaum is specialized in this area and can be consulted by others for any lead in plant based research of their interest.

Developing Linkages for better outcome

HPC recommended that ICMR Institutes should develop linkages with local medical colleges and other institutions to better utilize the infrastructure facilities and broaden the biomedical research horizon in the country.

Promotion of Translational Research

HPC while commending the recently started translational program of ICMR recommended strongly that promising leads identified by ICMR Institutes should be commercialized for providing affordable and cost-effective diagnostics, vaccines and drugs after independent evaluation.

Network of Viral Diagnostic Laboratories

HPC noted the nation-wide network of virology lab-network initiated by ICMR on behalf of DHR to enhance capacity to deal with emerging epidemics of viral diseases. This would save time and money for transportation of samples to distant laboratories in Delhi and Pune as has been the case currently as well as help in timely diagnosis and research based on local needs. HPC recommended the future evolution of this programme as a DHR scheme where ICMR will continue to promote research through this network.

The recommendations of HPC with respect to need for improvement/modification in ongoing activities are given in Table 21.

(b) phasing expenditure in XII plan for each component of the scheme

The year wise expenditure on Extramural Activities, Intramural Activities, Infrastructure Developments and expenditure on core obligatory activities is shown in the box below:

Activity	Expenditure Required Year Wise (Rs in lakhs)					
	2012-13	2013-14	2014-15	2015-16	2016-17	Total
A. Extramural Activities						
Advanced Centres	1487	1025	617	230	226	3585
Task Force Projects	4212	2824	1383	497	353	9269
Adhoc Projects	5786	4255	1854	194	-	12089
Research Fellowships	2216	1156	579	164	75	4190
Other Essential Activities	2460	2464	2198	1914	1396	10432
Long Term Projects	3407	3765	4185	4604	5061	21022
Total	19568	15489	10816	7603	7111	60587
B. Intramural Activities						
Intramural Research at ICMR Institute/Centres including intramural projects	9000	8091	7500	6500	5000	36091
Core Obligatory Activities	3254	3254	3284	3384	4425	17601
Total	12254	11345	10784	9884	9425	53692
C. Infrastructure Developments						
Capital Work	2415	23914	14893	--	--	41222
Grand Total	34237	50748	36493	17487	16536	155501

(c) setting of physical and financial milestones/targets for the XII Plan for each component.

A total of Rs. 605.87 crores would be required for ongoing extramural activities during XII five year plan to complete activities of 1773 programmes/activities. A budget of Rs. 536.92 crores would be required to complete spill over intramural research activities of ICMR institutes/centres including intramural projects and core obligatory activities. A total of Rs. 412.22 crores would be required for ongoing capital work. Thus Rs. 1555.01 crores would be required during XII plan to complete the objectives and mandate of various activities initiated during XI plan.

Activity	Expenditure Required Year Wise (Rs in lakhs)					
	2012-13	2013-14	2014-15	2015-16	2016-17	Total
A. Extramural Activities						
Advanced Centres (12)	1487 (12)	1025 (9)	617 (7)	230 (5)	226 (5)	3585
Task Force Projects (180)	4212 (180)	2824 (131)	1383 (51)	497 (12)	353 (8)	9269
Adhoc Projects (793)	5786 (793)	4255 (509)	1854 (201)	194 (11)	-	12089
Research Fellowships (670)	2216 (670)	1156 (454)	579 (183)	164 (43)	75 (23)	4190
Long Term Projects (6)	3407 (6)	3765 (6)	4185 (6)	4604 (6)	5061 (6)	21022
Other essential Activities (112)	2460 (112)	2464 (81)	2198 (61)	1914 (44)	1396 (38)	10432
Total (1773)	19568 (1773)	15489 (1190)	10816 (509)	7603 (121)	7111 (80)	60587
B. Intramural Activities						
Intramural Research at ICMR Institutes/Centres including intramural projects	9000	8091	7500	6500	5000	36091
Core Obligatory Activities	3254	3254	3284	3384	4425	17601
Total	12254	11345	10784	9884	9425	53692
C. Infrastructure Developments						
Capital Work	2415	23914	14893	--	--	41222
Grand Total	34237	50748	36493	17487	16536	155501

Table 21: Specific observations/suggestions as made by the Committee during interactions with Directors of Institute and Heads of Divisions at ICMR Hqrs.

A. Activities recommended to be dropped			
Sr. No.	Observations of the HPC	Action taken/to be taken	Remarks
1.	Testing and screening of herbal and plant preparations by a number of ICMR Institutes, as piecemeal efforts should be discouraged and may only be taken further, if there is any lead.	Included as recommendation (Page No. 91)	This activity will be dropped
2.	Studies like use of fishes for mosquito control, establishment of role of <i>An. stephensi</i> as a vector of malaria, use of drugs for control of filariasis which have been tested from time to time and have proven utility need not be repeated unless their application in a new area is planned. Efforts are needed to transfer such technologies for translation and implementation in various parts of the country as part of National Vector Borne Disease Control Programme	Included as recommendation (Page No. 91)	This activity will be dropped
3.	NIOP, New Delhi should discontinue studies on toxicology, metabolic (diabetes) and chronic diseases which are mandates of other Institutions.	Included as recommendation (Page No 91)	This activity will be dropped
4.	Studies on the Economic cost of dengue in India (CRME, Madurai)	HPC recommended the discontinuation of this activity.	This activity will be dropped
5.	Nutrition Monitoring Survey on NNMB pattern in Jodhpur district of Rajasthan (DMRC, Jodhpur).	HPC recommended the discontinuation of this activity.	This activity will be dropped
6.	To assess the pattern of occupational related injuries of patients attended Employees State Insurance Corporation Hospitals- Database during 2009-12 at Bangalore (NIOH, Ahmedabad).	HPC recommended the discontinuation of this activity.	This activity will be dropped
7.	Trends of demographic profile of population employed in different occupations through the available census details (NIOH, Ahmedabad).	HPC recommended the discontinuation of this activity.	This activity will be dropped
8.	Identification and characterization of sperm flagellar proteins relevant to motility (NIRRH, Mumbai)	HPC recommended the discontinuation of this activity.	This activity will be dropped
9.	Validation of differentially regulated sperm proteins & Role of tubulin acetylation/deacetylation in sperm, Studies on sperm progesterone in male fertility (NIRRH, Mumbai)	HPC recommended the discontinuation of this activity.	This activity will be dropped

10.	Electronmicrographic studies related to pathogenesis of leprosy (NJIL&OMD, Agra)	HPC recommended the discontinuation of this activity.	This activity will be dropped
11	Role of cytokines in chikungunya infection in order to understand generate information with a view to alter current treatment strategies (RMRC, Port Blair)	HPC recommended the discontinuation of this activity.	This activity will be dropped
12.	Studies on chronic arthropathy, a complication in chikungunya infection to assess whether patient management strategies could be altered (RMRC, Port Blair)	HPC recommended the discontinuation of this activity.	This activity will be dropped
13.	Search for anti-leishmanial activity in crude plant's extract (RMRI, Patna)	HPC recommended the discontinuation of this activity.	This activity will be dropped
14.	Comparative molecular modeling of various important proteins of different Leishmania strains and ligand-protein interaction (RMRI, Patna)	HPC recommended the discontinuation of this activity.	This activity will be dropped
15.	ICMR-INCLN MOU (International Health Division)	HPC recommended the discontinuation of this activity.	This activity will be dropped
16.	ICMR-UCLA MOU (International Health Division)	HPC recommended the discontinuation of this activity.	This activity will be dropped
17.	Proposed setting up tissue bank (NCD Division, ICMR Hqrs)	HPC recommended the discontinuation of this activity.	This activity will be dropped
18.	Research on DAZ genes (NCD, Division, ICMR Hqrs).	HPC recommended the discontinuation of this activity.	This activity will be dropped
19.	Development of pharmacogenomic facilities at NIIH, Mumbai. The HPC observed that this is no doubt currently a fashionable research activity, however, this would require extensive, complex studies of as yet unproven utility. Institute with so many other interesting and fruitful programmes must carefully lay down its priorities.	The reason for developing a pharmacogenomics facility for haematology was that many targeted drugs are coming in the market for haematological disorders and haematological toxicity is one of the major problem for many existing and new drugs but in India there is no centre for monitoring this problem. Some of the HIV targeted medicines, antiepileptic drugs and oral anticoagulants now are prescribed on pharmacogenomic findings.	This activity will be dropped

B. Activities recommended for revision/modification/continuation

Sr. No.	Observations of the HPC	Action taken/to be taken	Remarks
1	The HPC observed that many ICMR Institutes are working in isolation while dealing with the same problem hence suggested to bring out disease specific documents in consultation with other institutes involved in a particular area of research with lead institute playing the major role so as to make joint and coordinated efforts to overcome a problem which may be helpful to the policy makers and programme managers in decision making.	Consolidated disease specific documents have been prepared on dengue/chikungunya, Japanese encephalitis, leishmaniasis, lymphatic filariasis, malaria, chlamydiasis, diarrhoeal diseases, leprosy, tuberculosis, non arboviral diseases and human papilloma virus.	Convergence of research efforts, multi-centric coordinated approach developed and approved (Annexure 11 to 25)
2.	ICMR should work closely with State Governments within existing health system and should also develop linkages with related departments of government so as to play an important role in implementation of health related national programmes, e.g., Ministry of Agriculture, Department of Biotechnology, etc.	ICMR has been working with state Governments. The linkages with the state Government will further be strengthen.	To be continued
3.	Activities related to the National Programme carried out by the ICMR Institutes should be continued.	Such activities will be continued during XII Plan as per the needs.	To be continued
4.	ICMR should develop an ambitious time bound programme for eradication of certain diseases like leprosy, kala-azar (leishmaniasis), filariasis and paragonimiasis as a grand challenge.	Plan for elimination of these diseases has been included in the report under the broad goals to be achieved (page 86) as well as in the recommendation (page 91)	Follow-up will be ensured.
5.	Important leads/ technologies claimed to be developed by the ICMR Institutes should be tested and validated independently and this should be reflected properly in the outcome related deliverables in the XII plan.	Technologies developed or expected to be completed in 2013 & 2014 will be targeted. Work on other >40 technologies will be completed during the 5 Year Plan so that they become available to the people (Annexure 10).	High Priority/ To be continued
6	National and international collaboration between ICMR institutes and other National universities and medical colleges should be developed.	ICMR is already having National and International collaboration and expanding research outreach in the medical colleges. Linkages will be further strengthened during the XII Plan.	Activity to be accelerated.
7.	Many institutes have multiple investigator driven disjointed programmes. Attempts should be made to have atleast some major institutional challenges of national importance or to acquire global leadership identified.	Roadmap for multicentric collaborative control programme for vector borne diseases, tribal health, translational programmes for affordable technologies have been developed in consultation with the institutes involved in such activities.	Revised/ coordinated approach

8.	ICMR institutes should have MOU with medical colleges, universities, research institutes, in the region for promoting collaborative biomedical research and human resource development.	Already this has been suggested by various committees. A monitoring mechanism to implement this recommendation will be put in place.	Revised/ Modification Follow-up action to be taken
9.	<ul style="list-style-type: none"> Studies related to genetic disorders and their diagnosis are important services and need to be continued. However efforts should be made to train other local institutes to carry out such tests. Establishment of National database on genetic diseases. 	<p>ICMR has already taken initiative in this regard. A road map with defined deliverables will be prepared during XII Plan</p> <p>Efforts will be made for creating such a database</p>	<p>Revised/ Road Map to be prepared</p> <p>Follow up action will be taken</p>
10.	Cancer in north-east India: Understanding the role of tobacco at coordinating unit of NCRP, Bangalore. The HPC felt that this is already known? New perspective if any should be mentioned	This will be reviewed and only new perspective will be focused for research	Review and modify
11.	Estimation of malaria morbidity burden in India. The HPC observed that this is an ongoing study which will have to be continued. However, suggested that it could be taken over by the NVBDCP ?	Malaria burden studies alone by ICMR institutes may not be encouraged unless linked to research on intervention methods of diagnosis and NVBDCP will be informed of the recommendation	To be revised
12.	The HPC while evaluating the research activities of CRME, Madurai and NIN, Hyderabad observed that they have large number of disjointed projects which may not produce the desired outcome due to many technical and administrative constraints. The HPC suggested that these institutes should focus their efforts and prepare joint and cohesive projects with goal oriented objectives and deliverable outcome so as to become a part of the national disease specific programme.	CRME, Madurai and NIN, Hyderabad will reassess their studies and make joint efforts directed towards disease specific goals.	To be revised and modified
13.	Consolidated information on extramural activities in terms of publications, patents, and leads should be prepared. Important leads/technologies developed by the institutes should be tested and validated independently.	Information pertaining to publications, patents and leads pertaining to extramural projects has been collected from all Divisions of ICMR Hqrs and has been included in the report (page 41,43).For making this effort goal directed, harvest groups with subject specific committees are being constituted to analyse the output of extramural project of last five years.	Follow up action to be taken up
14.	There should be an independent programme on Health Economics and Policy Research.	ICMR has already proposed an Institute on same lines in the XII Plan (Annexure 26).	Follow up to be taken

15.	Cohort of people living with HIV on ART will provide the backbone for NARI studies on those living longer with HIV. This is an important activity for long term follow up.	Follow up action will be taken.	Follow-up to be done
16.	A grand challenge for research is for reducing the incidence of tuberculosis, preventing MDR and dealing with the emerging problems of HIV/TB co-infection.	Follow up action will be taken.	Follow-up to be done
17.	NIRT should clarify its role regarding support to RNTCP programme versus research in advancing frontiers of knowledge to become globally competitive.	Follow up action will be taken.	Follow-up to be done
18.	Assessment of the utility of mass vitamin D supplementation to effectively reduce the incidence of tuberculosis in vitamin D deficient population. The HPC observed that it is an impossible task to get an answer.	Biostatisticians should be consulted to guide future research.	Follow up to be done
19	Most of the activities of the GRC, Mumbai are important as service to the society and/or generating data bases. There is no new direction or any new major research initiative proposed.	GRC, Mumbai will be asked to develop a clear cut road map of activities for XII Plan	Follow up to be done
20.	Activities of the National Virus Repository at NARI, Pune has been very low due to lack of funding and staff. This activity should be properly supported and linked to other centres having similar facilities as also to the planned virus laboratory network around the country.	Activities of the National Virus Repository will be strengthened after its review by expert group	Follow up to be done
21.	Survey of HIV drug resistance in different parts of the country is an essential service activity and should be continued or transferred to appropriate authorities.	Will be implemented.	Follow up to be done
22.	Evaluation of efficacy of polyherbal (Basant) anti HIV vaginal microbicide in humanized mouse model and its mode of action. Next plan of action should be clarified and can it be taken further for clinical use ?	Follow up action will be taken for translation of these research findings.	Follow up to be done
23.	Population based Cancer Registry is primarily a service programme of National importance and need to be expanded in other states.	Population based Cancer Registry Programme will be further strengthened and expanded	Follow up to be done

24.	Evaluation of anti-herpes virus activity of bioactive alkaloid, its characterization, synthesis and mechanism of action by NICED, Kolkata. The HPC observed that these are interesting studies for publication of papers and it is not sure if NICED can take these to product development. Of course at this stage collaboration may be established with other ICMR (NIV), CSIR (CDRI/CIMAP) Institutes or industry for some most promising leads for product development.	In case if there is any lead, collaboration with other institutes will be established for product development	Follow up to be done
25.	Over 100 outbreaks were investigated by MAE/MPH scholars of NIE, Chennai and evidence generated that led to appropriate recommendation to the policy and programme. The HPC noted that this is very important achievement and should be continued.	Such type of activities will be continued and other ICMR institutes will also follow the same.	Follow up to be done
26.	The HPC observed that Capacity building programmes like MPH, Postgraduate diploma in HIV Epidemiology, strengthening field epidemiology in north-eastern states in India, long term bioethics training programmes etc. are all important training programmes and should continue on regular basis.	All these activities will be continued and strengthened	Follow up to be done
27.	ICMR Task Force for Leprosy: Socio-cultural epidemiology of leprosy in India, social acceptance of leprosy and leprosy patients in India. The HPC observed that such studies are not of much use unless associated with educational programmes for public.	These studies will be reviewed and modified as per the comments of HPC	Follow up to be done
28.	NIIH, Mumbai has proposed setting up of specialized labs/centres. HPC wondered if they can manage all these successfully at the same time while there are already a number of ongoing surveys and service activities?	As per the recommendation of the High Power Committee, number of new centres has been reduced	Follow up to be done
29.	Most of the studies on Thalassaemia carried out by NIIH, Mumbai should now be integrated with studies at other ICMR centres and number of diagnostic techniques developed at this centre need to be actively transferred to other centre.	NIIH, Mumbai will collaborate with other ICMR centres for these activities	Follow up to be done
30.	Molecular pathology in red cell enzyme deficiencies: This has great translation value as all red cells enzymes are hardly tested in any medical centre.	Follow up action will be taken	Follow up to be done
31.	Practical utility of several polymorphism of ABO antigen should be described.	NIIH, Mumbai will do the needful	Follow up to be done

32.	Establishment of cheap, fast, accurate flow cytometric technique for evaluation of osmotic fragility in hemolytic anaemia and second trimester pre-natal diagnosis in different hematological disorders. The HPC felt that these are major contributions from the institute and should be transmitted to other diagnostic centres in the country.	NIIH, Mumbai will make efforts for transmission of these techniques to other centres	Follow up to be done
33.	Micro-PCR based RT-PCR method of malaria diagnosis. HPC wanted to know if this technique could be extended to other centres or at any time used as a routine diagnostic test as part of National Malaria control programme.	NIMR, New Delhi will assess the feasibility of its use as a routine diagnosis.	Follow up to be done
34.	RMRC, Bhubneshwar reported in-depth review of malaria and independent assessment of new tools such as rapid diagnostic kit, insecticide treatment of community owned nets in Orissa. The HPC desired to know, if it brought down the incidence of malaria in the population studied.	RMRC, Bhubneshwar, NIMR and VCRC are working with state Govt in different districts. An assessment will be made to study the impact.	Follow up to be done
35.	The HPC also noted that there are a number of research programmes on obese rat for more than a decade. These should be summarized properly. Committee also noted that various projects related to dietary iron availability should be combined as one project. The committee also suggested the wider dissemination of useful knowledge.	NIN, Hyderabad will take the follow-up action in this regard.	Follow up to be done
36.	The HPC suggested that a series of studies on undernourished women shall result in a comprehensive recommendation for Health Care System.	NIN, Hyderabad will prepare appropriate recommendations for public health system	Follow up to be done
37.	The HPC noted the activities of Centre for Advanced Research for Pre-clinical Toxicology and revision of nutrient requirements and recommended dietary allowances for Indians as an important contribution.	These activities will be further strengthened	Follow up to be done
38.	The HPC noted that studies on betel quid chewing as identified by MDR analysis as the single main risk factor for breast cancer in NE region is an interesting observation and needs validation	Results of this study will be validated at other centres as well	Follow up to be done

39.	The HPC noted that a PCR method developed to detect <i>Chlamydia trachomatis</i> (CT) infection in cervical samples by NIRRH, Mumbai and technology transfer is in process. HPC wanted to know if there has been interaction with NIOP in this regard as this institute has also been working in this direction.	ICMR institutes having common programme are interacting and working in synergy as recommended by HPC. These technologies are to be validated by 2013-2014	Follow up to be done
40.	Studies of the NIRRH related to bone mineral density should focus also on low income groups and its comparison with the data from other centres from India.	Follow-up action will be taken	Follow up to be done
41.	The HPC observed that the proposed study on psychosocial issues facing MDR TB patients and design appropriate intervention strategies to promote drug adherence are ongoing efforts for years. The Institute should state what is not known.	Programme will be built to implement the suggestions as NIRT – JALMA and other ICMR institutes are having a joint SAC now.	Follow up to be done
42.	On ICMR-NIH (Indo-US) joint statement on Prevention of sexually transmitted diseases and HIV/AIDS, the Committee observed that statement is not enough and there is a need to specify the benefits of such programs	Benefits of joint collaboration will be identified after further review	Follow up to be done
43.	The HPC noted that outcome of the studies of the Centre for Advanced Research and other projects should highlight the practical utility of the specific findings	Needful will be done within next two years after detailed review of CARs	Follow up to be done
44.	The HPC appreciated the initiative of establishing 13 viral diagnostic laboratories during XI Plan and suggested that these need to be coordinated and should establish national database.	Network of Viral diagnostic Laboratories will be strengthened and coordination will be made for database creation. This is already a full scheme under DHR.	Follow up to be done
45.	The HPC noted that due to a Long Term Project on JE in South Arcot District of Tamil Nadu, there has been a drastic decline in JE cases and recommended that this project needs to be continued. However it is desired that information on quantitative decline may be provided prior to formulating future research.	Quantitative decline in JE cases due to this project will be highlighted by CRME, Madurai.	Follow up to be done
46.	Several biolarvicides have been tried and found useful. It should be possible to formulate a comprehensive recommendation on the basis of this study which should be discussed with National Vector Borne Disease Control Programme (NVBDCP) for practical implementation.	ICMR institutes focusing research in the area of Vector Borne Disease Control are now working together to address common vector borne diseases and also collaborating with the NVBDCP.	Follow up action for this activity will be taken during 2013-2014 so as to make clear recommendations

47.	ICMR School of Public Health at NIE, Chennai launched in XI Plan needs a relook	Activities of the School of Public Health to be reviewed and necessary steps will be taken	To be reviewed
48.	Prevalence of mental disorders, osteoporosis, chronic pulmonary obstructive disease, cardiovascular diseases and health seeking behavior among rural and urban women in Thiruvallur district, Tamil Nadu. The HPC noted that these are too ambitious and unrealistic proposals (NIE, Chennai).	These proposals will be re-evaluated and focus to obtain meaningful results	To be reviewed
49.	The HPC while evaluating the research studies of NIRRH and those related to studies on mechanism of sexual transmission of HIV commented that it would be helpful in developing vaccines for the control of HIV. However it is desired to know the new strategy that is expected to succeed when billion dollars research has failed worldwide so far ?	This will be reviewed, if necessary with the help of an expert committee.	To be reviewed
50.	Reports of completed studies providing useful information (e.g. National Institute of Malaria Research) may be submitted to health Department– the role of ICMR in supporting National health programmes (malaria, TB, vector control, HIV, etc) to be specified and formal mechanism for collaboration should be established.	Reports are being shared with the concerned health departments and ICMR is collaborating with the National programmes for the disease management. After review of output of recently completed programmes, information will be provided to national programmes.	Follow up action to be taken.
51.	There are number of studies on JE/ AES reported under various heads and by various institutes. These should be consolidated concise statement of what has been achieved and what needs to be followed up in XII plan.	A consolidated document with contribution of all Institutes on vector borne diseases including JE/ AES has been prepared following the HPC interaction.	Follow up action to be taken.
52.	Demonstration of vector control in reducing/curtailing of transmission of lymphatic filariasis under MDA and maintaining its benefit has been demonstrated. The HPC suggested that, we should have a national programme using this knowledge to eradicate the disease in XII Plan.	ICMR research efforts will be directed towards the elimination of filariasis in collaboration with the National Vector Borne Disease Control Programme.	Further efforts will be made to strengthen this activity.
53.	An early warning system of extrinsic virus activity of dengue has been developed and intervention study has been successful in effective disease reduction in 20 districts. If verified, it is an important contribution and need to be upscaled to cover country.	Follow up action will be taken	Further efforts will be made to strengthen this activity.
54.	Monitoring of current anti-malarial therapy for its efficacy and side effects. HPC wondered if it should not be the activity of the National Programme ?	Research studies related to anti-malarial therapy are being carried out in collaboration with the NVBDCP.	In future ICMR's specific role will be defined.

55.	The HPC while evaluating the research studies of NIN, Hyderabad noted that several useful observations have been made and there is a need for these to be passed on to the dieticians and public at large.	NIN, Hyderabad will develop a programme to prioritize the leads for implementation of important observations for the public use.	Modified plan of action to be formulated based on these suggestions.
56.	Biobanks on TB, malaria and leishmaniasis etc need to be strengthened to act as national resource for research.	Existing biobanks will be further strengthened.	To be continued
57.	Screening modalities for cervical cancer by ICPO Noida is an important contribution and needs to be extended to other centres	Follow up action will be taken.	To be continued
58.	Clinical Trial Unit (CTU) at NARI, Pune has been funded by NIH where microbicide and HPTN052 trials were done. This is an example of International collaboration and outcome of the results should be clarified.	<p>The CTU participated in ten studies that included four clinical trials and three observational studies and a New Work Concept sheet under AIDS Clinical Trial Group (ACTG) network; an HIV Prevention Trial Network (HPTN) and an Microbicide Trial Network (MTN) trial .</p> <p>Contributed to New Knowledge Development and impact on public health:</p> <p>The HPTN 052 study demonstrated that if HIV infected individuals in an HIV discordant couple setting are provided antiretroviral therapy (ART) irrespective of their CD4 counts, the risk of HIV transmission to the uninfected partner is reduced by 96%. HPTN O52 findings have prompted WHO to consider revising guidelines for ART (New guidelines will be released soon, thus has influenced policy on ART globally.</p> <p>A5175 trial documented inferiority of unboosted atazanavir in combination with ddl and FTC.</p> <p>NWCS260 study found that HBeAg negative status can be a surrogate to indicate that treatment of Hepatitis B in co-infected persons is not required in resource-limited settings where HBV DNA PCR is not available.</p> <p>CTU supported establishment of the HIV drug resistance genotyping laboratory that was the first in South East Asia to get accreditation by WHO and NIH,USA. This laboratory conducted Drug resistance threshold and monitoring surveys for the National programme.</p>	To be continued

59.	First systematic study reported by NIIH on the effect of hydroxyl urea in reducing clinical severity in patients with different haemoglobinopathies. The Committee felt that this is an important contribution and desired to know, if this has been used elsewhere in the world before this study ?	Institute has done a pilot project showing its effectiveness. Scientists from AIIMS have also shown usefulness of this compound in thalassemia intermedia patients. Similar studies have been reported from different countries. However an exhaustive study in this area needs to be done because of variation in clinical presentation of the disease based on epistasis.	To be continued.
60.	Identification of the rare blood groups in the donor population. Registries of these donors need to be maintained in our country. This is an important activity of national relevance.	This activity will be continued	To be continued.
61.	Developed climate based model for impact of climate change on malaria by the year 2030. The HPC observed that this is an important futuristic activity.	Climate based studies are being continued by NIMR	To be continued.
62.	Establishment of Centre of Excellence for primary immuno deficiency disorders at NIIH. The institute should highlight the significance in the light of patients likely to be affected by these disorders based on earlier study or literature survey.	Institute is working on Immunodeficiency under strained budget condition for last few years. However on an average 400 patients are referred to NIIH each year and approx. 100patients are diagnosed to have defined immunodeficiency. World literature shows 1 out 1000 children born; do have some sort of immunodeficiency. Hence the problem is huge and needs to be tackled. In India due to various infections even milder immunodeficiency can have serious consequences. NIIH is also trying to develop prenatal diagnosis facility for the same. This centre of excellence also has plans to train persons at medical college level. Excellent results have already been obtained. This study needs to be continued	Recommended for action in XII Plan.
63.	The role of circulating micro particles and the coagulation system in sickle cell disease and thalassaemia. The HPC desired that Institute should clarify whether any preliminary study has been carried out to establish the technique to characterize and quantify these micro particles.	NIIH has already standardised the test and is a part of international society of thrombosis, haemostasis, SSC standardisation programme. Moreover it is already working on microparticles in recurrent pregnancy loss.	Recommended for further research.

64.	<p>New born screening and molecular characterization for red cell enzyme effects on haemoglobinopathies in north-east India. The HPC felt that some of the haemoglobinopathies have been eradicated in the mediterranean countries. If so, could a comprehensive programme be planned to do so in at least some regions in India.</p>	<p>Control of haemoglobinopathy as achieved in Mediterranean countries strongly hinges on awareness, education of the family and community, marriage counselling, carrier detection and finally religious heads not to endorse marriages unless premarital counselling is done.</p> <p>Present study would eventually help to develop prenatal diagnostic facilities. Based on <i>JaiVigyan</i> programme of ICMR, linkages are being developed with each state govt programmes to control haemoglobinopathy. At present in India prenatal diagnosis is preventing 200-300 thalassaemia birth in the country.</p> <p>Controlling haemoglobinopathy across the country will require the strong will of all State Govts and the Central Govt through constitution of a huge national haemoglobinopathy control programme where this institute can take a lead.</p>	<p>May be attempted in a phased manner depending upon the availability of resources.</p>
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