

HUMAN RESOURCES  
IN  
SCIENCE AND TECHNOLOGY

## 2.1: Distribution of R&D scientists (Headcount) by sector 2010-2013

Sector	2010				2013			
	Scientists		Technicians		Scientists		Technicians	
	No	%	No	%	No	%	No.	%
Government	1,673	32.4	1,703	43.6	1,819	31.88	1,278	39.94
Higher Education	2,315	44.8	865	22.2	2,668	46.77	543	16.97
Business Enterprise	1,169	22.7	1,326	33.9	1,204	21.10	1,366	42.69
Private Non Profit (PNP)	5	0.1	13	0.3	14	0.25	13	0.41
<b>Total</b>	<b>5,162</b>	<b>100</b>	<b>3,907</b>	<b>100</b>	<b>5,705</b>	<b>100</b>	<b>3,200</b>	<b>100</b>

Source: National R&D Surveys, Sri Lanka 2010 & 2013(NSF)

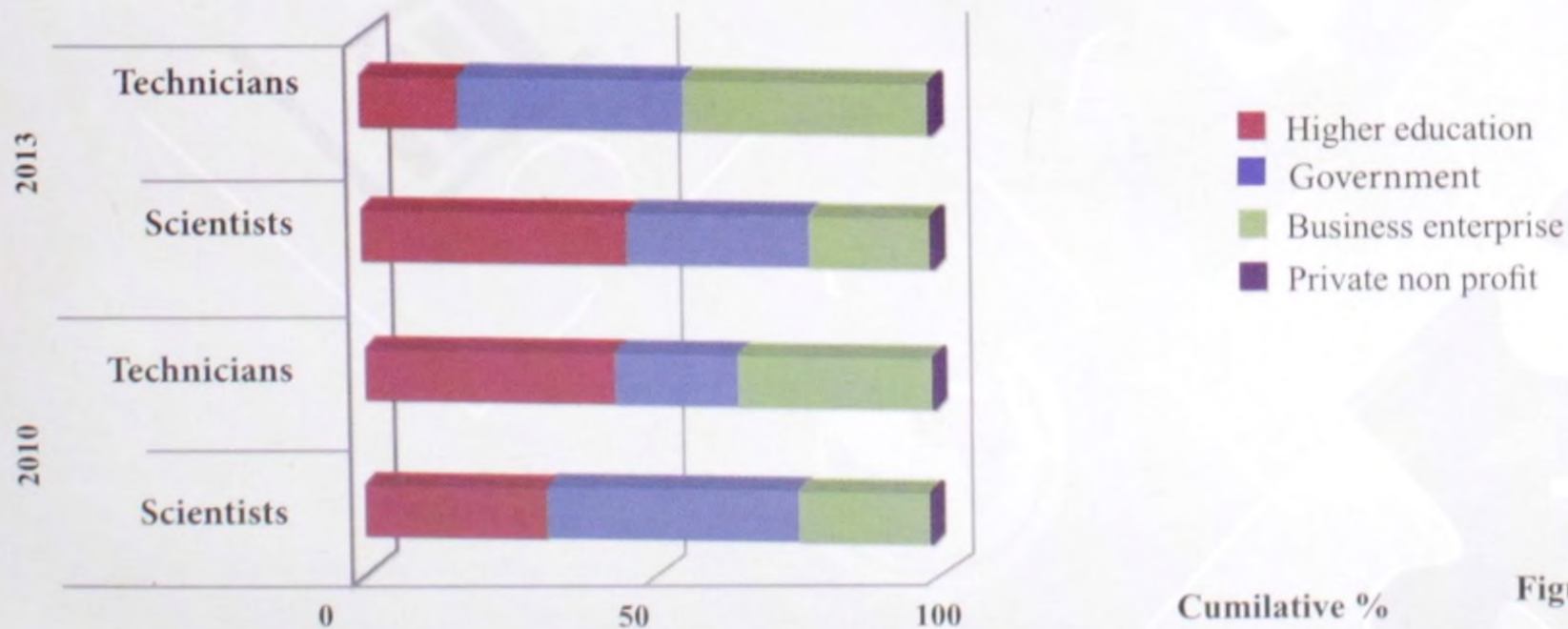


Figure 9

## 2.2: Number of R&D scientists (Headcount) by discipline and sex 2010-2013

Discipline	Headcount of R&D scientists (2010)						Headcount of R&D scientists (2013)					
	Male		Female		Total		Male		Female		Total	
	No	%	No	%	No	%	No	%	No	%	No	%
Natural sciences	877	27	584	31	1,461	29	870	25	529	24	1,399	25
Agricultural sciences	649	20	401	21	1,050	20	657	19	407	18	1,064	19
Engineering & technologies	837	26	310	16	1,147	22	819	24	339	15	1,158	20
Medical sciences	452	14	392	21	844	16	493	14	483	22	976	17
Social sciences & humanities	283	8	120	6	403	8	424	12	283	13	707	12
Other	158	5	99	5	257	5	217	6	184	8	401	7
<b>TOTAL</b>	<b>3,256</b>	<b>100</b>	<b>1,906</b>	<b>100</b>	<b>5,162</b>	<b>100</b>	<b>3,480</b>	<b>100</b>	<b>2,225</b>	<b>100</b>	<b>5,705</b>	<b>100</b>

Source: National R&D Surveys, Sri Lanka 2010 & 2013 (NSF)

## Distribution of R&D scientists in different disciplines 2004-2013

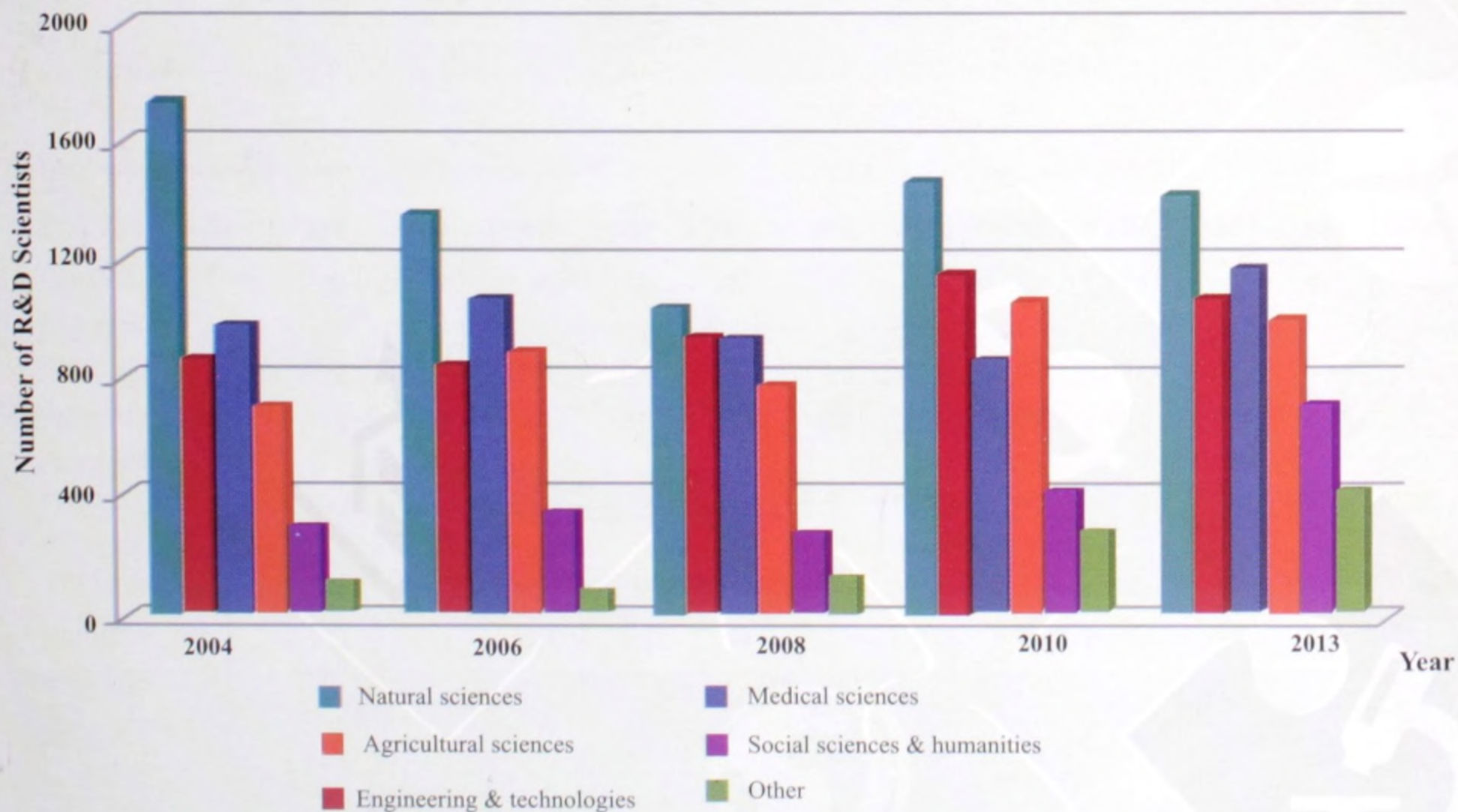


Figure 10

### 2.3: Educational qualifications of R&D scientists 2013

Qualification	Male		Female		Total	
	No	%	No	%	No	%
Ph.D.	1,051	30	549	25	1,600	28
M. Phil./ M.Sc.	457	13	379	17	836	15
MD/MS	284	8	295	13	579	10
B.Sc. + PG Diploma	146	4	75	3	221	4
B.Sc. Special	624	18	391	18	1,015	18
B.Sc. General	410	12	275	12	685	12
Other	508	15	261	12	769	13
<b>Total</b>	<b>3,480</b>	<b>100</b>	<b>2,225</b>	<b>100</b>	<b>5,705</b>	<b>100</b>

Source: National R&D Survey, Sri Lanka 2013 (NSF)

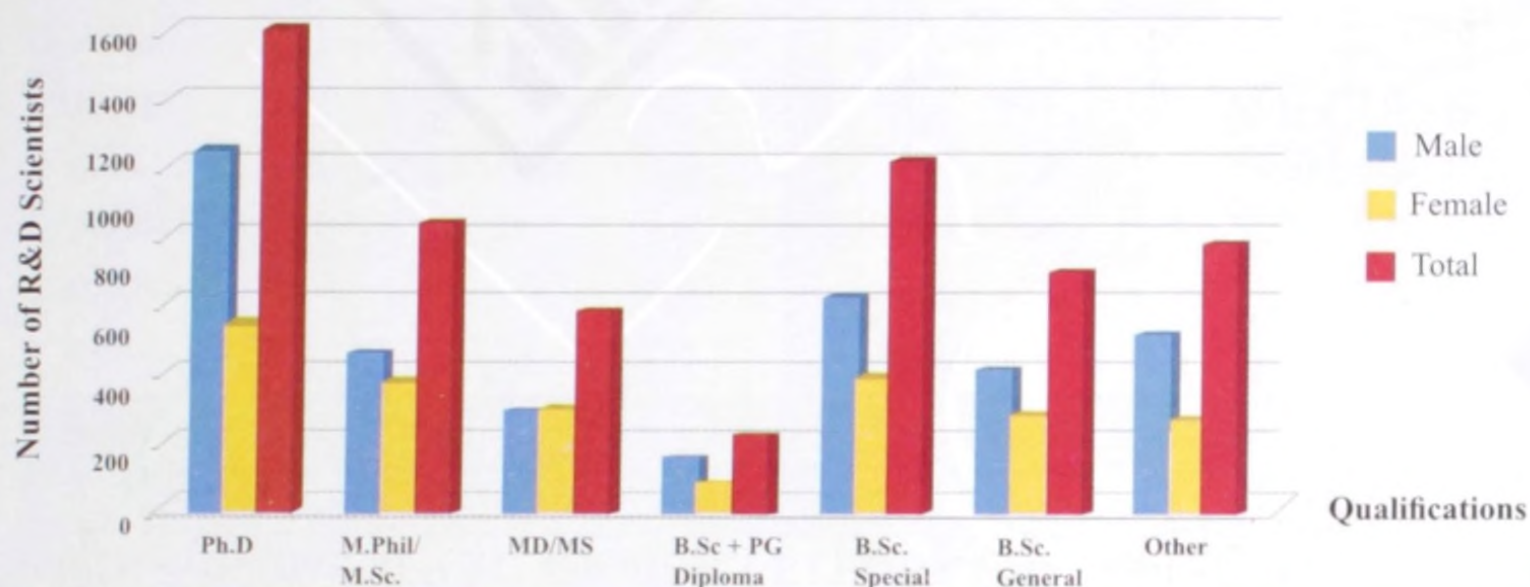
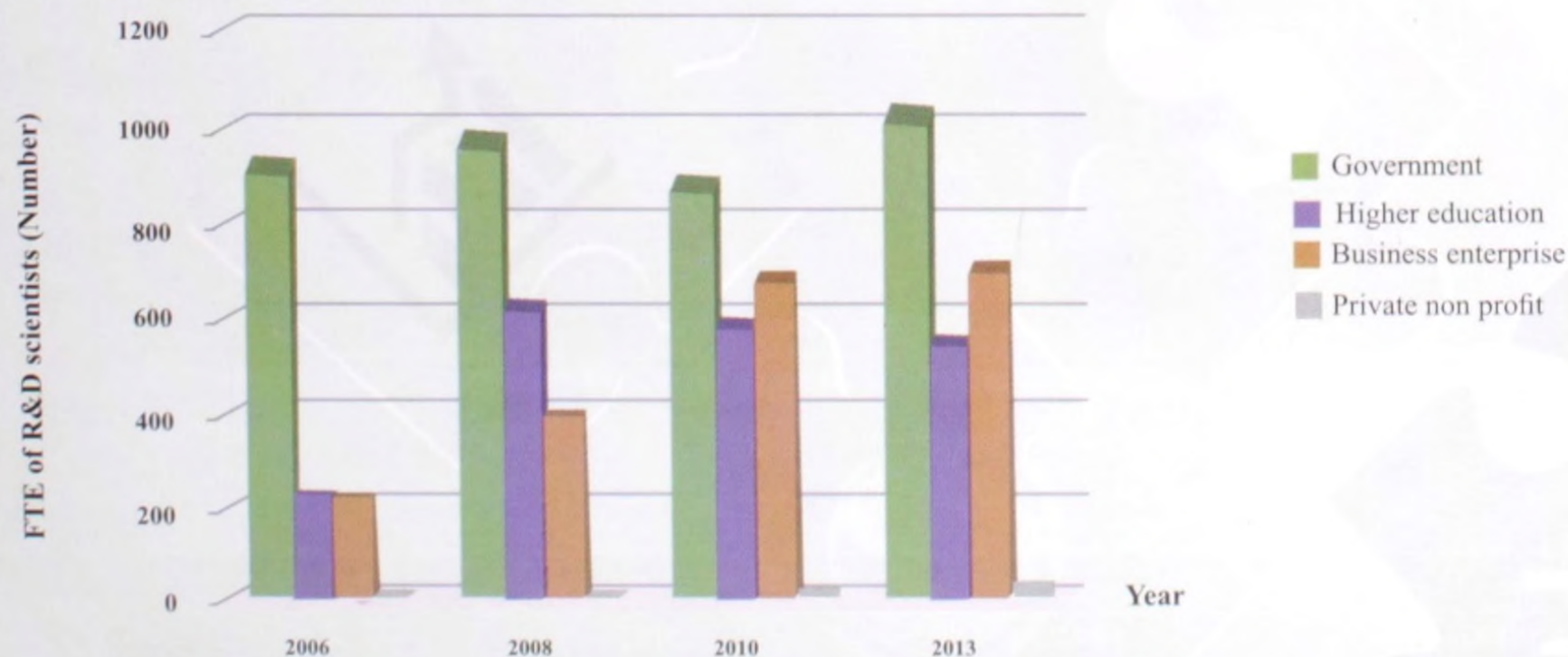


Figure 11

## 2.4 Distribution of R&D scientists ( FTE) by sector and gender 2013

Sector	Full Time Equivalent of R&D scientists			
	Male	Female	Total	% Female
Government	611	419	1030	18
Higher education	301	233	534	10
Business enterprise	507	192	698	8
PNP	6	8	14	0
<b>Total</b>	<b>1,425</b>	<b>851</b>	<b>2,276</b>	<b>37</b>

Source: National R&D Survey, Sri Lanka 2013 (NSF)



Trends in R&D Scientists' (FTE) distribution by sector 2006-2010

Figure 12

## 2.5: Distribution of R&D scientists (FTE) by discipline and by gender 2013

Discipline	Full Time Equivalent of R&D scientists			
	Male	Female	Total	%Female
Natural sciences	453	216	669	32.28
Engineering & technologies	336	118	454	25.99
Medical sciences	146	115	261	44.06
Agricultural sciences	320	216	536	40.53
Social sciences and humanities	121	82	203	40.39
Other	49	104	153	67.97
<b>Total</b>	<b>1,425</b>	<b>852</b>	<b>2,276</b>	<b>37.43</b>

Source: National R&D Survey, Sri Lanka 2013 (NSF)

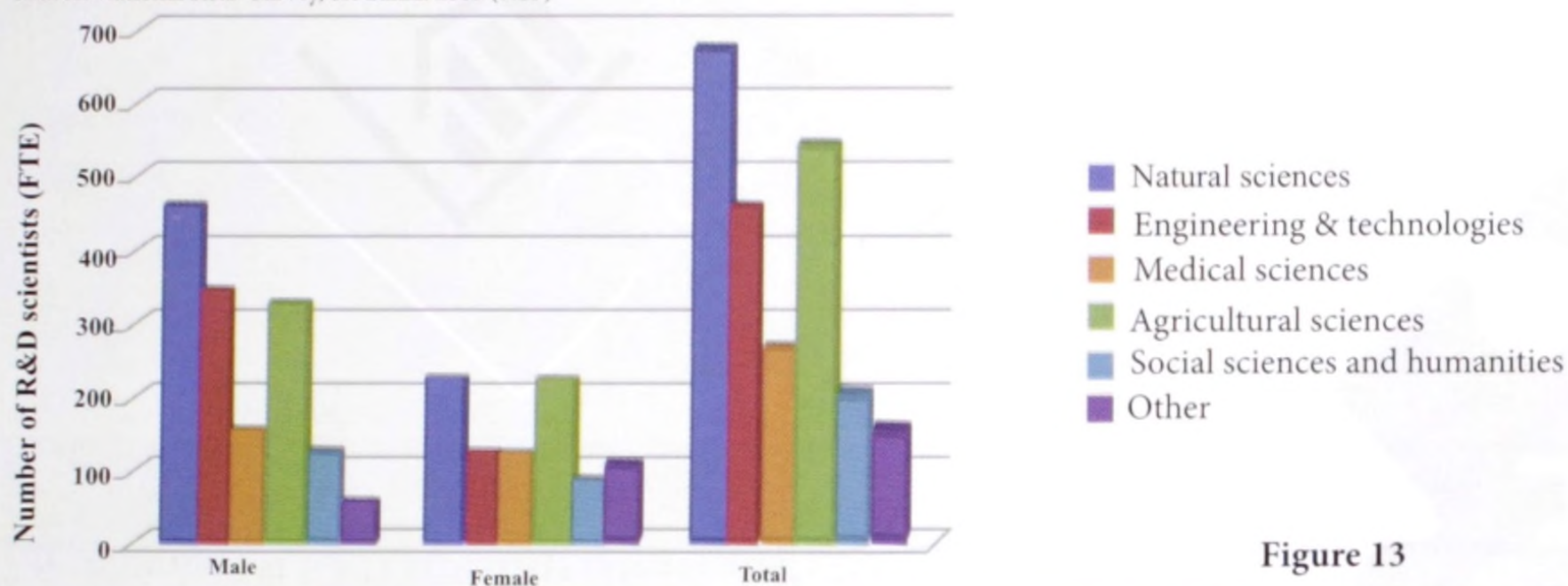


Figure 13

## 2.6: Number of R&D scientists (Headcounts) by age and sex 2013

Age group	R&D scientists				R&D scientists (FTE)			
	Male	Female	Total	%	Male	Female	Total	%
21-30	414	434	848	15	213	218	432	19
31-40	1,068	759	1,826	32	476	309	785	34
41-50	1,089	650	1,739	30	421	208	629	28
51-60	724	320	1,044	18	258	102	360	16
Above 60	165	42	207	4	52	10	62	3
Not mentioned	21	21	42	4	4	4	8	0
<b>Total</b>	<b>3,480</b>	<b>2,225</b>	<b>5,705</b>	<b>100</b>	<b>1,425</b>	<b>851</b>	<b>2276</b>	<b>100</b>

Source: National R&D Survey, Sri Lanka 2013 (NSF)

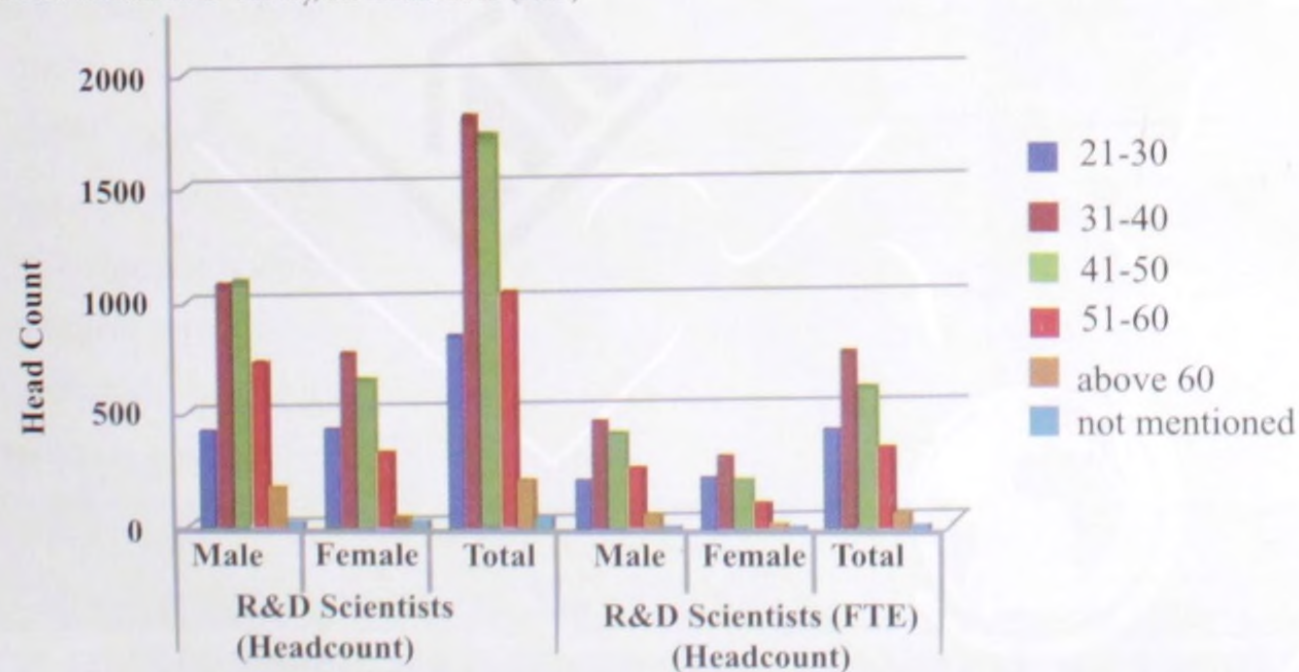


Figure 14

## 2.7 : Number of R&D scientists in selected countries 2009-2012

Country	Year (data available)	Researchers per million population	Researchers (FTE) per million population
Belgium	2011	8,579	5,714
Brazil	2010	2,404	1,366
China	2012	3,353	2,358
Cuba	2012	1,294	2,407
France	2011	8,535	6,328
Germany	2011	10,053	6,933
Kuwait	2011	272	272
Iraq	2011	3,397	554
Japan	2011	8,997	6,832
New Zealand	2011	9,674	5,347
Pakistan	2011	740	400
Republic of Korea	2011	10,899	7,415
Singapore	2012	8,486	7,441
Sri Lanka	2013	278	111
ireland	2011	8,057	4,767

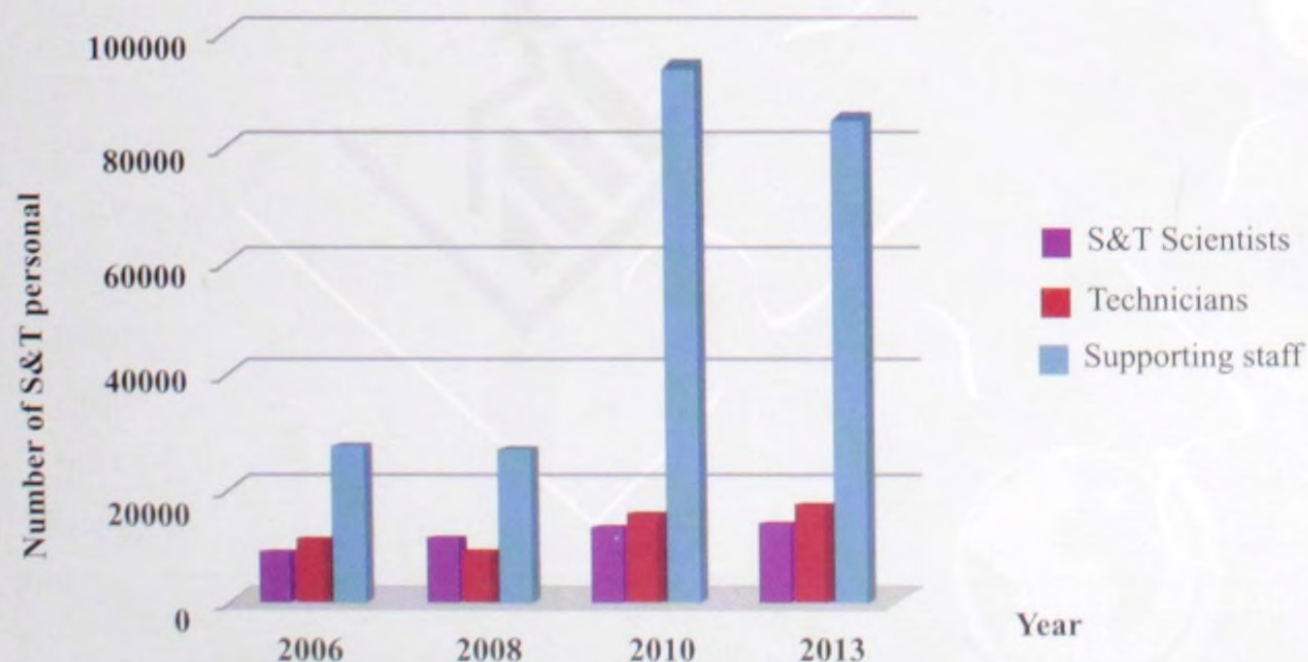
Source: Adopted from UNESCO Statistics 2012

\*National R&D Surveys, Sri Lanka 2013 (NSF)

## 2.8 : Science and Technology Personnel (STP) by Category 2010-2013

STP Category	2010			2013		
	Total number	Percent of STP	Per million inhabitants	Total number	Percent of STP	Per million inhabitants
S&T Scientists	12,139	10.05	586.43	12,627	11.12	618.96
Technicians	14,528	12.03	701.83	16,169	14.25	792.58
Other supporting staff	94,130	77.92	4,547.34	84,652	74.63	4,149.6
<b>Total STP</b>	<b>120,797</b>	<b>100</b>	<b>5,835.60</b>	<b>113,447</b>	<b>100.00</b>	<b>5,561.14</b>

Source: National R&D Surveys, Sri Lanka 2010 & 2013 (NSF)



Trends in Science and Technology Personnel distribution 2006-2013

Figure 15

## 2.9 : Distribution of S&T Personnel (STP) by Sector 2010-2013

Sector	2010		2013	
	STP	Percent	STP	Percent
Government	28,247	23.38	18,992	16.74
Higher education	4,609	3.82	3,873	3.41
Business enterprise	87,909	72.77	90,546	79.81
Private non profit (PNP)	32	0.03	36	0.03
<b>Total</b>	<b>120,797</b>	<b>100</b>	<b>113,447</b>	<b>100</b>

Source: National R&D Surveys, Sri Lanka 2008, 2010 & 2013 (NSF)

Note: Total STP includes all researchers, other Scientists in the Service Sector Institutions, Technicians and Supporting Staff; na-not applicable

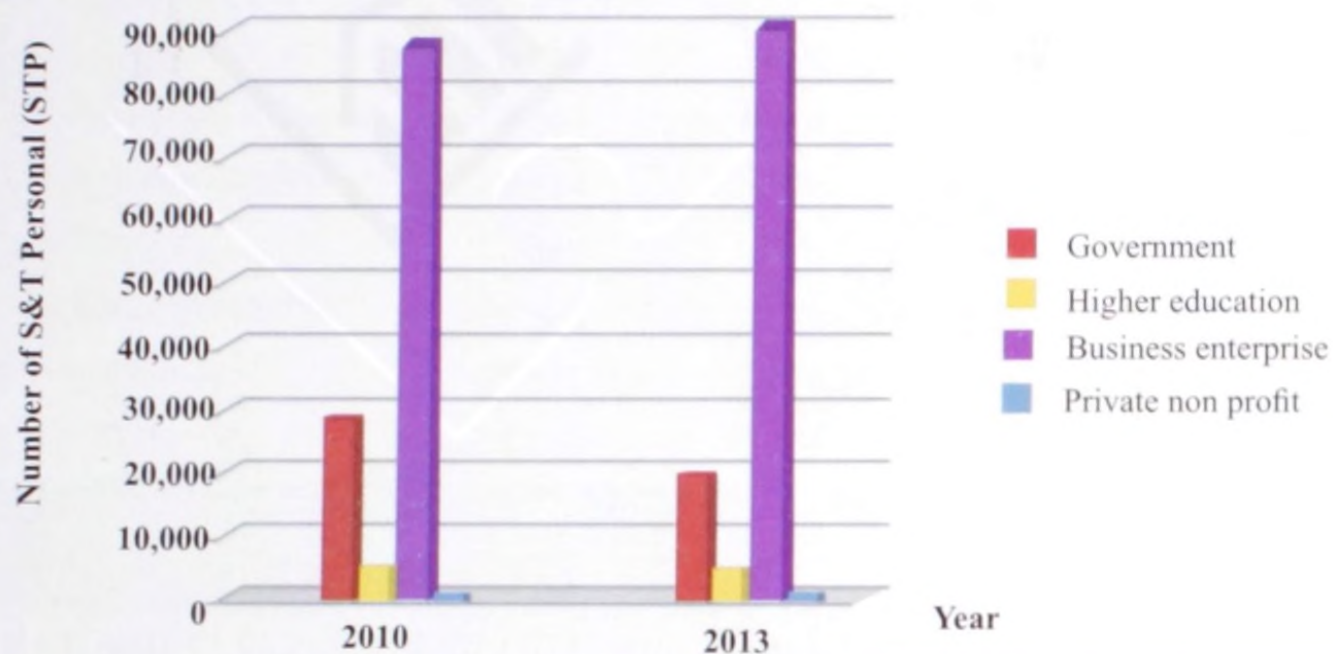


Figure 16

2.10 : Distribution of Science and Technology Personnel (STP) by discipline 2010-2013

Discipline	2010		2013	
	No	%	No	%
Natural sciences	22,166	18.3	19,955	17.6
Agricultural sciences	22,891	18.9	21,233	18.7
Engineering & technologies	63,762	52.8	57,195	50.4
Medical sciences	5,280	4.4	6,699	5.9
Social sciences and humanities	4,798	4.0	4,769	4.2
Other /Not specified	1,900	1.6	3,596	3.2
<b>Total</b>	<b>120,797</b>	<b>100.0</b>	<b>113,447</b>	<b>100.0</b>

Source: National R&D Surveys, Sri Lanka 2008, 2010 & 2013(NSF)

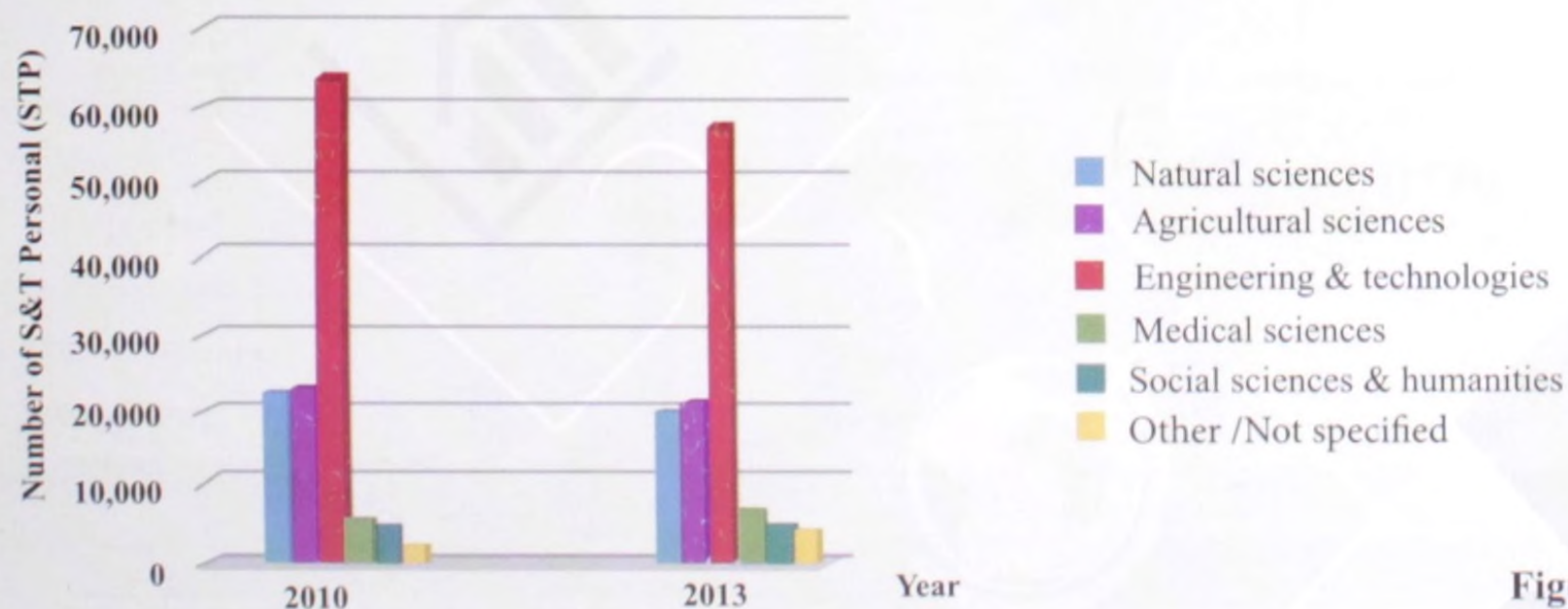


Figure 17