ANNEX 8

Report on CABI South East Asia

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20 March 2015

1. CABI South-East Asia (CABI SEA)Centre: composition of staff and coverage of work

CABI SEA centre was set up as a full regional centre covering work in Southeast Asian countries in 2011. During 2006-2011, the centre covered work in Southeast Asian and East Asian countries. Currently CABI SEA is located in the campus of the Malaysian Agricultural Research and Development Institute (MARDI), the premier public food and agricultural research and development organization in Malaysia. Currently, it has an office of 12 technical staff (not including the Regional Director and administrative and finance staff), increasing from 6 in 2011. Senior scientists and the Regional director were ex-employees of MARDI. Their linkages to MARDI are therefore especially good due to personal contacts. Half of the scientists are relatively young scientists starting their career with less than 10 years of experience. The leadership in scientific direction and project administration is being provided by senior scientists of the Centre. Senior scientists are specialists in entomology/IPM/ecology/plant pathology/bacteriology/botany and weed science. Apart from the in-house scientists, there are also some 15 or more CABI SEA associates working on project-specific tasks--many of them retired professors and professionals in relevant areas. As such, the Centre is able to access a wide range of expertise at a relatively less costly arrangement through these associates. For example, experts on tropical fruits, taxonomy, biotechnology, soil microbiology, agronomy, animal health and quarantine and biosecurity are among these associates.

2. Review of current business/funding sources as a basis for identifying opportunities for potential new business in the region

Apart from the business units of publishing, research databases, books, compendia and internet resources, CABI SEA undertakes international development activities under the following themes: commodities and trade (commodities), invasive species management (IS), microbial bioservices (bioservices), knowledge of development (KFD) and mobile.

The focus areas in this centre include

- Plant health/SPS (IS/commodities)
- Biosecurity planning (IS/commodities)
- Sustainable pest management (IS/commodities)
- Biodiversity management and use (IS/commodities/bioservices)
- Knowledge management for sustainable development and ecosystem services (KFD)

- Smallholder development and empowerment (KFD)

While development activities relating to mobile theme is just beginning and expected to be increased in 2015 with projects in Myanmar. It involves getting health and plant protection information to users via mobile phones.

Apart from the traditional areas of work on pest and disease management, the centre has interesting and innovative work on natural resource management dealing with ecology, biodiversity, forest management and climate change as they related to pest and diseases. In 2015, the centre received a small grant to conduct workshop on climate change and crop pests and diseases in greater Mekong region from CGIAR climate change global program. This is expected to lead to a large development project on the topic. CABI is seen as a central focal point on the topic as it cuts across all crops and all pests and diseases.

The funding for the centre increased from £0.76m. in 2011 to £1.43m. in 2014. In 2014, the centre generated a profit of £0.28m. increasing from £0.08m. in 2011. While the funding has been adequate, the staff indicated that funding is more competitive these days and most funding are consultancies and development in nature as against research. Donors to projects are quite diversified ranging from international agencies as UNEP/GEF, EuropeAid, the Standards and Trade Development Facility (STDF) of the World Trade Organization and CGIAR to individual countries such as AusAid, NZaid, IDRC, Federal Ministry of Education and Research, Germany, ACIAR and Government of Brunei Darussalam. A number of projects are financed by Malaysian organizations such as Malaysian Palm Oil Board, FELDA Global Venture R&D, TechnoFund, United Plantations Berhad, AgriFood Corp, etc. Opportunities for potential new business in the region abound as the region is vast, fast growing and diverse. CGIAR climate change global research program is an interesting opportunity for new projects for CABI as pest/disease/invasive species management can be strategically linked to climate change. Sanitary and phytosanitary measures for food safety and animal and plant health measures as agreed upon by WTO is also another emerging area of importance and have been started and investigated in this region. Models of technology transfer in PLANTWISE programs given diverse farmers' backgrounds, economic and environmental contexts in this region are areas of potential new business. Potential new business is especially bright for work in Myanmar where many donors want to start work. CABI can seek such potential area of work as it has already started work in these areas. The mNutrition project in Myanmar is an example showing such potential.

The centre's work covers South-east Asian countries, namely Malaysia, Indonesia, Vietnam, the Philippines, Cambodia, Thailand, Lao PDR, Brunei Darussalam and Myanmar. Some work is done for the Pacific such as for Papua New Guinea.

3. Contribution of CABI SEA

CABI SEA works with a range of stakeholders, being farmers, extension workers, member country governments, non-governmental organizations, charities and foundations, research agencies, universities, national donor agencies, development agencies as well as corporate organizations.

CABI was instrumental in the introduction of oil palm pollinator weevils to Southeast Asia for the immense benefit of the industry. Dr. A.R. Syed of CIBC worked with Unilevel to identify natural pollinators (*Elaidobius kamerunicus*) in West Africa to be brought to Malaysia. This case was cited as the most prominent success story for CABI SEA although documents on this case are fragmented and there is a need to systematically trace the impacts of such benefits.

Apart from the excellent work dealing with traditional plant protection, the centre has a few innovative areas of work which can expand CABI coverage to important fields. Given Southeast Asian economies being highly dependent on trade, the work on quarantine pests is of crucial importance. The project on "Beyond compliance: managing quarantine pests in Southeast Asia" was funded by the Standards and Trade Development Facility (STDF) of the World Trade Organization and is implemented by staff of CABI SEA and CABI UK. It has produced a review that describes pest risk management for imports and exports in the region, including the design and evaluation of these measures. It is developing a coordinated framework, which can be shared regionally and presented to the International Plant Protection Convention (IPPC). The work of this kind is hugely important and is policy oriented which can translate to higher income and standards of living for millions of people in the region.

The centre has launched innovative work on climate change and pest related problems. There is a potential a good funding from CGIAR climate change research programs. In this matter, CABI is enjoying the service of an associate being a well-known retired IRRI entomologist (Dr. Heong Kong Luen) who has helped CABI in project development and to link to donors and advanced research institutions. In his opinion, pest management and pesticide use is a growing field of importance that CABI can excel and it is in high demand both in the region and worldwide.

Judging from the projects funded, the contributions of CABI SEA are greatly appreciated by national and international partners. Projects are conceived in a participatory manner with close dialogue with national and international partners. Workshops are important venues of dialogue although personal contacts and linkages are key to successful project development. Having key, respectable, well-known scientists in the centre as well as good links to outside expertise (CABI associates) is therefore a prerequisite for success. To partners, CABI is seen as an organization working in areas where other organizations do not do or have the expertise. Capacity building in the relevant subject matter for partners is a strength of CABI. The mode operandi this centre is taking is problem solving e.g. tackling the ganoderma problem through microbial interventions, tackling cocao pod borer and coffee berry borer in Malaysia, Indonesia and Papua New Guinea, stopping pests and diseases from eating into trade, establishing mechanisms for invasive species prevention and control in forest ecosystems, ensuring food safety for farmers,

consumers and industry in Vietnam, etc. Using the science and knowledge accumulated in CABI, such problem solving nature of CABI SEA is appreciated by partners. While publications are part of the outputs of some of these projects, many publications are mainly papers presented in seminars, conferences and workshops and reviewed journal articles are rare. Nevertheless, the contributions of CABI SEA are not seen in academic journal papers but in problem solving and capacity building for a large number of people in South-East Asian countries. How CABI outreach and development programs have impacted on farmers' or industry's income both in the short term, medium term and the long term is perhaps a more relevant question to ask. There are successful cases in Southeast and East Asia CABI work although no research has been done to ascertain or quantify such incidence. Projects are done, reports written and new projects are perceived and initiated. Long-term look into CABI achievements are needed. Measurement of CABI impacts is therefore important although given the pools of expertise a small centre as CABI SEA, it is not conceivable at this regional centre level. Such exercise can be commissioned from HQ using core funding although expertise can be found within Southeast or East Asian region.

Some cautions in CABI SEA's contribution dealing with the requests for work by partners may bring CABI SEA into areas not necessarily CABI's current strengths. Strategic alignment with CABI's vision, mission, goals, outputs and outcomes should be criteria for project engagement. Such alignment must be part of the centre's regular monitoring and evaluation system. Currently, M&E system is based mainly on donors' requirement. Nevertheless, CABI strategies should be continually redefined and not confine CABI to traditional strengths but to open door to new opportunities.

Contributions of CABI SEA to partners and donors can be approximate in the short term by the size of grants they receive in each year although this takes no account of ripple effects of their contributions. As a lot of their work is in capacity building and there may be good work done by partners after they are trained by CABI. Currently, there seems to be no system of tracking their contributions (impact). Stakeholders' and donors' survey conducted by the Science Review team will give part of the picture. From the interviews of partners and donors, it seems the CABI SEA is contributing to significantly positive improvements to farmers and industries in areas in which other organizations do not have the same level of experience and knowledge.

4. Quality of current science, particularly in terms of understanding of M &E needs

While the work in a regional centre like CABI SEA does not require top-notched science, the level of quality of science is still an essential element in most projects undertaken. Quality of science is necessary for CABI reputation in all regional centres. Currently, quality of science is ensured through a pool of quality scientific staff through the years of experience in relevant fields. Current monitoring and evaluation systems based on donors' requirements and CABI's project management mechanisms. Donors are also those who monitor the quality of CABI science. These M&E mechanisms concentrate on delivery of outputs. However, there should be separate mechanisms to ensure the quality of science embedded in these projects. As most

projects conducted by CABI SEA are development in nature, the quality of science which forms the basis of these projects is deemed adequate. If CABI wants to strengthen the quality of science in projects, a science audit system should be designed although this would be costly and currently not perceived to be a problem by donors, partners and CABI regional scientists.

Quality of CABI science and CABI reputation can be built by other CABI centres such as CABI UK and CABI CH as they are more advanced research centres and they have more laboratory facilities. Such reputation will benefit other regional centres, attract funds for international development and enable CABI to fulfill its vision to be the number one 'go to place' for insightful, independent, practical and science-based knowledge about agriculture. Regional centres in developing countries will act as arms of CABI to reach out to hundreds of million people in need.

5. Capacity in social science or biological science research. Should CABI focus on building capacity in social science or biological science research – where are the greatest opportunities?

Currently, CABI SEA does not have any expertise in social science. Within CABI, there is minimal expertise in economics but not much on other social science. However, there is a recognized need to engage in research dealing with the social side of technology transfer and adoption as well as the measure the impact of CABI's work. Such social science research can be part of a large development project. Ways should be sought to incorporate, yet economize the social science expertise. Research associates can be such an option. Alternatively, a unit with a minimum critical mass should be built on social science expertise. They can engage in applied research as part of larger project undertaken by CABI.

As for biological science research, there is also a recognized need for CABI as an institute to have a more diversified expertise covering not only plant protection areas but also biological sciences, natural resource sciences as well as molecular sciences. This is because as farmers' problems are identified related to plant health, these sciences will be helpful for an effective analysis and recommendations. In the regional centres, such diversified pools of expertise will enable CABI to handle practical agro-ecological systems in a more comprehensive manner. Inter-centre collaboration can help to economize investment in such expertise.

To build capacity in social science and biological science in CABI, CABI management must think of ways where these expertise can be shared and costed across centres. The greatest opportunities lie in areas of impact assessment as good impact studies can build reputation for CABI and attract more research and development project funds. There are many success stories in the two Asian centres I visited but these need to be systematically documented and their impact identified and verified. Capacity in impact assessment needs to be a high priority.

Scientific collaboration between regional centres e.g. CABI-UK, CABI-CH on the one hand and other regional centres on the other hand should be enhanced.

6. Scientific development of non-Plantwise projects and programmes, does CABI have the staff and right skills?

As the projects undertaken by CABI SEA are mostly development or policy oriented in nature, the science components are basic disciplinary subject matter. CABI SEA does not have difficulty to handle them. Some projects are jointly managed by staff from CABI UK and there a good synergy between different fields of sciences can be achieved. Moreover, the centre has a system of employing associates who are knowledgeable scientists but they are not full-time CABI employees. These associates add to the pools of knowledge bank for the centre. Among CABI SEA scientists, CABI UK and CABI SEA associates, CABI SEA seems to have the right scientific staff and skills for the projects.

7. **Assessment of niche to exploit**

From interviewing staff and partners in SEA, their opinion is that CABI should still be a research and development centre specializing on plant protection although even this area should be broadened into the social science side of the issue. Pest/disease management and optimal pesticide use requires going into farmers´ practices and government policies. Pest related issues deal with agronomic practices and natural resource management. In other words, while CABI has the niche in plant protection, the pools of knowledge that are needed for CABI to excel go beyond plant pathology and entomology. Extension, economics, agronomy, horticulture, soil science and related fields in agriculture are also important. The question is the good balance between these disciplines and how it can be brought about at a reasonable cost. More research can take a holistic and integrative approach across different disciplines. The social science research is applied in nature and can be conveniently undertaken at regional centres in developing countries while more plant protection/IAS/biosecurity/biological research can be done in CABI centre in Europe. Regional centres in developing countries can do more development work and within that context, they can engage in applied research as part of development efforts. CABI scientists in Europe and in regional centres in developing countries can also join together in a project to bring science and applied science forward. A good example is the CocoaSafe project where good linkages across centres have been made based on good science. In this way, work in CABI in Europe and CABI in developing countries can supplement each other to achieve CABI vision and mission.

In terms of donors, further niches to exploit for CABI SEA are the strengthening of relationship and engagement with Australia (especially ACIAR). Indonesia, GMS economies, PNG and Timor Leste remain to be target countries for ACIAR, IDRC, ADB; more projects could be developed

with technology transfers and capacity building being facilitated. APEC and ASEAN+ can also provide funding for working with developing / member economies.

Further collaboration in some new areas such as Ecosystem Services for Poverty Alleviation (ESPA), ecological engineering, climate smart agriculture, innovative information delivery, tropical indigenous fruits characterization exploitation, plant & animal quarantine systems, animal production accreditation, etc. could be explored as new funding opportunities have emerged. Here, good alignment of CABI strategic vision should be made in order to streamline projects which strengthen CABI's identity. Clearly, the niche for CABI in Southeast Asia countries would be defined differently from other regions.

8. Facilities at MARDI CABI SEA can build upon

MARDI is a premier research institution in Malaysia. It has advanced laboratories. An area that CABI SEA can build upon is molecular laboratories and facilities. Other laboratories can also be access. Good planning and revised memorandum of understanding with MARDI will be needed. Efforts should be sorted to have more active MARDI-CABI collaborative projects and shared laboratory facilities. Currently, apart from the office space at MARDI and excellent goodwill, the collaboration between MARDI and CABI has been on a need basis and rather fragmented.

9. Support in project development

With many of the scientists being young and have less experience in project development, some support in project development is desirable. Such support can take a form of training, workshops to be conducted by project development group. Project Development Group can be broadened in terms of number of personnel as well as their expertise. With a larger and more diversified group, they can expan engage in more support activities for regional centre staff in developing countries. CABI bursary system for young scientists is good and can also be expanded.

10. Response to and implementation of recommendations from the prior review

From the 2009 CABI science review, a recommendation was made to build impact assessment capability. While CABI is trying to build such capability, it is not yet materialized in the SEA and EA regional centres. As the employment of a full time person into this area may be costly, I believe that with some funding provided, economists in CAAS or MARDI could be approached to undertake these studies.

11. Conclusion

In conclusion, CABI SEA is making a good contribution to partners and member countries in the field of plant health/SPS, IAS prevention and management, biosecurity planning, sustainable pest/disease management, sustainable production techniques, commodity chains, sustainability indicators and eco-audit, participatory smallholder development and empowerment. The SEA

region (including the South Pacific) is a region with growing economies, yet agriculture dependent, biodiversity-rich and environmentally-fragile. For CABI, it is an important region providing good opportunities for significant work and information product sales. In responding to the needs of many partners in the region, the CABI SEA has made notable progress. Many international development projects have been designed, proposed, granted, and implemented with partners. The projects have been funded by a good variety of sponsors. Senior scientific staff is instrumental and provide necessary key links to donors and partners.

Given the small team size and limited budget, CABI SEA engages mostly in international development projects and not so much in cutting edge research. The pool of expertise is also not as diversified as it should be. This limits the breadth of work they can cover even if there are recognized needs. Moreover, development funding is undergoing high competition. There are also tough financial expectations from collaborators. The existing staff seems to be overworked and there is a lack of middle echelon group of scientists in CABI SEA and in many institutions in the region. Expansion of SEA team to include strong, yet middle-aged scientists and medium-to-long term retention of CABI reputation in the region seem a priority. Nevertheless as all staff and activities are project funded, partial core funding support for such effort may be necessary.

12. Appendix

a. Programme of visit

Monday, 9 March 2015	Activity	Remarks
09:30 – 12:30	Introduction to CABI SEA: Introduction to CABI SEA Staff Centre overview presentation Q & A Tour of Centre facilities (Office, Biopesticide Lab, Mycology / Pathology Lab, CABI Books, etc.)	Loke WH (RD SEA) All
12:30 – 14:00	Lunch in Marriott Hotel, IOI Resort	
14:00 – 17:30	CABI SEA Projects: Introduction and Overview GEF Forest Invasive Species Oil Palm Biosecurity Plan CocoaSafe Coffee / Tea break (15 minutes) Plantwise in SEA Ganoderma Management Q & A	Lum KY (Chief Scientist) Sivapragasam Lum KY Soetikno Jeremy Ngim Low YC Transport by Chan FW

17:30	Transfer back to Boulevard Hotel	
Tuesday, 10 March 2015	Activity	Remarks
09:00 – 12:00	Meeting with CABI SEA's key partners in Malaysia: Meeting with MARDI Meeting with TFNet Meeting with DoA	Loke WH, Sivapragasam, Lum KY and Soetikno to accompany
12:00 – 13:00	Lunch in CABI SEA office	All CABI SEA Staff, Associates and key partners
13:00 – 14:30	Focused session	Selected Associates and Staff
14:30lc - 16:00	Coffee / Tea Break	Chief Scientist & Thematic Heads
16:00 – 16:15	Round up session and conclusion of visit	All
16:15 – 17:00	Transfer back to Hotel	

b. List of persons met

CABI SEA Staff:

Dr. Loke Wai Hong (Regional Director SEA) (Entomology – IPM/Biocontrol)
Dr. Lum Keng Yeang (CABI SEA Chief Scientist) (Plant Pathology - Bacteriology)
Dr. Sivapragasam A. (Deputy RD SEA) (Entomology – Ecology/IPM)
Dr. Soetikno S.S. (CABI SEA Operations Director) (Botany/weed Science)
Mr. Jeremy Ngim (Scientist) (Agronomy - Commodities)
Mr. Chan Fook Wing (Scientist / IT & Communications Coordinator) (Engineering/IT)
Mr. Low Ying Chiang (Scientist) (Plant Pathology – Crop Diseases)
Ms. Khing Su Li (Scientist) (Biotechnology)
Ms. Chan Hong Twu (Scientist) (Mycology)
Ms. Lina Yip (Regional Marketing Manager)
Mr. Lum Weng Kiong (Accountant)
Ms. Vimala Nainoo (Administrative Assistant)
Mr. Govindan (Lab Technician)

CABI SEA Associates

Dr Heong Kong Luen (Entomologist – Rice Pests and Ecological Engineering)
Dr Lim Guan Soon (Entomologist – IPM and Farmer Training)
Dr Lee Boun Siew (Plant Pathologist – Soil borne pathogens and crop diseases)

CABI SEA Partners

Dr Ainu M. S. Suhaimi (Deputy Director International Relations, MARDI)
Dr Mohamad Roff Mohd. Noor (Director Strategic Planning and Innovation Management, MARDI)
Dato Dr Azizan Abdul Rashid (Deputy Director General Research, MARDI)
Mr Yacob Ahmad (CEO TFNet)
Mr Yusof Othman (Deputy Director Plant Biosecurity, Malaysian Department of Agriculture)

C. Projects conducted/being conducted by CABI SEA during 2010-1015

Table A1 Projects conducted by CABI SEA during 2010-2015

	CABI SEA Project title	**Sponsor/Donor Agency**	**Project Period**	**Partners**
1.	An Oil Palm Biosecurity Plan for Malaysia	Malaysian Palm Oil Board	2013 -15	
2.	*Ganoderma* Management through an Integrated Approach Focusing on Disease Suppression and Biological Antagonism	FELDA Global Venture R&D,	2011 -14	
3.	Pilot Scale Production of Indigenous Entomopathogens as Bio-Pesticides	TechnoFund, Govt. of Malaysia	2010 -14	
4.	Management of Bagworms in Oil Palm through an Integrated Approach with Biologicla Control Agents	United Plantations Berhad, Malaysia	2011 -13	
5.	Research and Management of Diseases of Papaya	Malaysian AgriFood Corporation	2009 - 10	
6.	Establishment of Plant & Animal Quarantine Services and Facilities in Brunei Darussalam	Govt. of Brunei Darussalam	2012 -15	
7.	Study on Distribution and Genetic Diversity of Indigenous Fruit Species in Brunei Darussalam	Govt. of Brunei Darussalam	2012 -15	
8.	Reduction of Pesticide Residues on Economic Crops through the Use of IPM Methods and Strengthening Capabilities in Insect Identification and	Govt. of Brunei Darussalam	2012 -15	
9.	Development of Bacterial and Fungal Disease Identification and Management in Agricultural Crops and Ornamental Plants	Govt. of Brunei Darussalam	2012 -15	
10.	Incursion Prevention and Management of Coffee Berry Borer in Papua New Guinea and Indonesia	ACIAR	2008-13	PNG: CIC, NAQiA Indonesia: ICCRI, DGEC

C. Projects conducted/being conducted by CABI SEA during 2010-1015

Table A1 Projects conducted by CABI SEA during 2010-2015

	CABI SEA Project title	Sponsor/Donor Agency	Project Period	Partners
11.	Managing Cocoa Pod Borer in PNG through Improved Risk Incursion Management Capabilities, IPM Strategies and Stakeholder Participatory Training	ACIAR	2007-12	PNG: CCIL; Univ. Sydney
12.	Integrated Weed Management Strategies for Oil palm	RSPO	2009-10	Golden Hope, UP, KLK (Malaysia); IOPRI, Lonsum & other Oilpalm Plantation industry members
13.	Assessing and improving on pesticide practices on cocoa in Indonesia	National Confectionary Association, USA	2011	ICCRI, Indonesia
14.	CocoaSafe - Capacity Building & Knowledge Sharing in SPS in Cocoa in SE Asia	STDF	2013-15	Malaysian Cocoa Board, ICCRI (Indonesia) & PNG CCIL
15.	Improved management strategies for cocoa in Papua New Guinea	ACIAR	2015-18	
16.	IPM International Baseline Study	Philip Morris International	2014	Indonesia
17.	AusAID SPS Capacity Building Program for ASEAN	AusAID	2007-12	ASEAN member countries
18.	AANZ-FTA SPS Program for ASEAN	AusAID and NZAID	2012-15	ASEAN member countries
19.	Land-use Intensity and Ecological Engineering - Assessment Tools for Risks and Opportunities in Irrigated Rice-based Production Systems (LEGATO)	Federal Ministry of Education and	2011 - 16	German Universities; Vietnam; Philippines

C. Projects conducted/being conducted by CABI SEA during 2010-1015

Table A1 Projects conducted by CABI SEA during 2010-2015

	CABI SEA Project title	**Sponsor/Donor Agency**	**Project Period**	**Partners**
20.	Agricultural innovation for smallholder farmers in the Greater Mekong Sub-region to improve food security in the context of impact and adaptation to climate change and in favor of economic development	EuropeAid	2011- 15	GMS countries; CABI China; PR China
21.	Beyond compliance: Integrated systems approach for pest risk management in southeast Asia	STDF	2011- 13	Vietnam, Cambodia, Thailand, Philippines,
22.	Removing barriers to Invasive Species Management in Production and Protection Forests in Southeast Asia	UNEP/GEF	2013 -15	ASEAN member countries
23.	**Plantwise** Program for Vietnam, Cambodia, Thailand, Myanmar	Multi-donors		Vietnam, Cambodia, Thailand, Myanmar
24.	Towards Improved Market Access for ASEAN Agricultural Commodities	IDRC	2009- 12	ASEAN member countries
25.	CGIAR-CCAFS Climate Change Workshop on Crop Pests & Diseases in GMS	CGIAR-CCAFS	2014	Vietnam, Cambodia, Lao PDR
26.	mNutrition	GSMA	2015 -	CABI Centres, Myanmar

Table A2 Key Financial / Performance Indicators (2011 to 2015)

CABI SEA:

Year	Projects (lead by SEA inclusive CDFs)			Gross Revenue (£)	Net Revenue (£)	Net Profit/Loss (£)	Headcount (Technical)*	Net Revenue per staff (£)	RS1 Staff Utilisation (%)
	Lvl 1	Lvl 2	Lvl 3						
2011	6	7	13	758,558	644,204	78,314	6	107,367	117.8
2012	6	8	8	1,072,797	878,819	127,534	8	109,852	108.1
2013	6	9	3	1,264,956	1,065,242	192,852	9	118,360	108.7
2014	5	4	16	1,426,268	1,160,074	284,538	9	128,987	112.1
2015 **	3 + 4[a]	3 + 6[a]	2 + 1[a]	1,232,921	1,071,785	70,295	12	89,315	102.1

* Headcount (Technical) does not include RD, Admin & Finance staff.

** 2015 figures are based on Budget.

[a] Identified/speculative projects.

Lvl 1 - project gross income > £250k

Lvl 2 - project gross income £50k - £250k

Lvl 3 - project gross income < £50k