



# Newton Agham Programme and its contributions to research innovation capacity in the Philippines

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# Contents

1. Background	3
2. Introduction to the Newton Agham Programme	4
3. Aim and methodology of the report	6
4. Results	8
4.1 Academic capacity building	9
4.2 Contribution to research innovation	12
4.3 Issues and challenges	14
5. Recommendations for the British Council to improve the Newton Agham Programme	16
6. Conclusion	20

# Background

The UK’s Newton Fund aims to ‘promote economic development and welfare of developing countries through sustainable and equitable partnerships’<sup>1</sup>. The UK government’s total investment under the Newton Fund is £735 million, with a requirement for matched funding support from each partner country.

The British Council in the Philippines commissioned an evaluation of the Newton Fund programme in the country, which aimed to assess the impact of the programme and identify the priorities, challenges and opportunities for interaction between government, academia and industry in the Philippine higher education sector.




<sup>1</sup> Department for Business, Energy and Industrial Strategy (2019), ‘Newton Fund and Global Challenges Research Fund Annual Report 2017–2018’, <https://www.newtonfund.ac.uk/files/newton-fund-and-global-challenges-research-fund-annual-report-2017-2018/>.




# Introduction to the Newton Agham Programme

The Philippines is one of the 17 partner countries which are listed by the Organisation for Economic Cooperation and Development as recipients of Official Development Assistance.


The partnership in the Philippines is called the Newton Agham Programme<sup>2</sup>. The programme identified the following priority areas for the Philippines:




Health and life sciences




Future cities




Environmental resilience



Agritech



Energy security



Digital, innovation and creativity

The budget committed for the Newton Fund in the Philippines from 2014 to 2020 is £26.3 million. This represents the overall spending from both the UK and the Philippines. To date, 93 Philippine and UK higher education institutions (HEIs) have participated in projects funded by the Newton Agham Programme, as shown in Table 1.

<sup>2</sup> For details see the Newton Agham Fund website: <https://www.newtonfund.ac.uk/about/about-partner-countries/philippines/>.



Table 1: Participation in the Newton Agham Programme projects

Newton Agham Programme projects			
	66 Total number of grants	48 Total UK HEIs	45 Total Philippine HEIs
• PhD scholarships		27	2118
• Institutional links		21	1417
• Researcher links travel grant		542	
• Researcher links workshops		11	88
• STEM Education Programme		21	



# Aim and methodology of the report

The data collected is analysed in terms of research capacity building: how well is the funding supporting the development of the research capacity of the researchers involved in the Newton Agham Programme.

This covers:

## IMPACT

How well has the Newton Fund:

- created an impact on society?
- contributed to the development of university-industry relationships?
- created innovative solutions for addressing the sustainable development goals<sup>3</sup>?

**PROBLEMS AND ISSUES** – what problems and issues have arisen during the project and how have they been addressed? The authors of the report gathered the data through interviews and a survey:

- 24 interviews were conducted with academics and policy makers, to analyse and evaluate the impact of the Newton Fund on capacity building.
- A survey was conducted among grant-holding funding partners in the UK and in the Philippines, to hear directly from beneficiaries of the funding, to consult them on key elements of the Newton Fund and to triangulate findings.



<sup>3</sup> <https://sustainabledevelopment.un.org/?menu=1300>.

# Results

Overall, the Newton Fund has performed very well in terms of creating meaningful projects aimed at solving local problems, developing research capacity of the institutions receiving the funding, creating strong university-industry relationships and establishing international links.

The Newton Fund was able to **achieve gender balance** in the survey with 50 per cent female and 50 per cent male grant holders. The main achievements of the Newton Fund are summarised in Table 2.

**Table 2:** Aims of the Newton Fund and evaluation of how well they have been met

AIMS	WELL	VERY WELL	EXCELLENTLY
01 Academic capacity building	Grant capturing development: participants learnt how to write grant proposals, such as applying for additional research funding and being able to capture grants at the end of the Newton Fund funding period	Development of publication skills	Learning, developing and implementing new methodologies and data collection methods
	Creating scholarships and applied research opportunities for PhD students	Informing policymakers and creating a policy dialogue	Creating international links
	Improving research in the areas of: <ul style="list-style-type: none"><li>• food production and security</li><li>• environment</li><li>• disaster risk reduction</li><li>• climate change and energy</li><li>• terrestrial and marine resources</li><li>• biodiversity and conservation</li><li>• smart analytics and engineering innovations</li><li>• health systems</li></ul>	Increasing the number of international publications	Learning, developing and implementing new methodologies
02 Impact	Designing new technical systems	Improving the resilience of the local communities	Improving local social welfare
03 University-industry relationships	Designing new strategies for university-industry links in the grant holders' Philippine universities	Designing pathways to impact on society and local organisations	Learning how to conduct a research partnership

## 4.1 Academic capacity building

The Newton Agham Programme has proven to be an effective programme to **enhance research innovation capacity** in the Philippines, to **support skills development** and to **expand expertise**. In the survey, 95% of the Newton Fund grant holders responded affirmatively to the question 'Have you learned new skills?' Respondents have also learned to be **interdisciplinary, transdisciplinary or multidisciplinary** in their work. 85% of the grant holders have declared they learned new literature.

For example, one survey respondent working on biodiversity had needed a text-mining tool, the competences to create which were present at the University of Manchester. The two universities co-created the process for text-mining, and Manchester developed the final text-mining tool that:

“**will eventually be used by the Department of Environmental and National Resources of the Philippines for [its] biodiversity database.**

Other respondents stated that they had learned how to design and apply a particular **methodology**, or a **technology** that they

learned only from a theoretical perspective, but which they did not know how to use in practice:

“**Some of the techniques were reinforced. We knew it, but we didn't use it. The technology was finally applied.**

95 per cent of the respondents to the survey agreed that they had learned a new method for data collection during the research grant period. For example, some teams were used to performing quantitative studies, and through the partners in the UK, they learned, designed, developed and applied a qualitative methodology, fully understanding its value:

“**the anthropologist in the field team [...] helped us design the methodology [...] we observed 18 persons in their work for two weeks. It was a non-participant observation. Field notes were taken. And so, the non-participant observer [...] was trained to observe and just write down what he or she observed over that course of two weeks.**



Having a UK partner enabled our researchers to design and apply this methodology, appreciated the typology of data that could be collected, or known how to analyse such data. The same team also learned to write a protocol and conduct interviews, which is paramount to the development of qualitative research. The UK team also trained the Philippines team to interpret the data and theorise from them:



**the other method was a semi-structured questionnaire which allowed open-ended discussion and probing of the thoughts, perceptions and feelings of the respondent [...] all of that data was then translated and then inputted into a software called NVivo..**

The respondents agreed that the Newton Fund made research funding accessible that might have been otherwise difficult in the Philippine context, since considered too novel, interdisciplinary and risky to undertake.

In some instances, the funding allowed for an **exchange of staff and students**, who were trained in new methodologies by the UK team, contributing to the development of research and teaching skills in the Philippines.

The Newton Fund created and established **research networks** to foster international collaboration.

A key factor that contributed to the success of the Newton Fund research grant was the **prior experience of the research team**: research

teams that had interacted on smaller projects in the past, e.g. taking part in the Newton Fund workshop grant, were more successful in delivering new projects. They also did not experience any issues or problems during the project period.

The participants benefitted from the international cooperation by **co-authoring and publishing in international journals**: 95 per cent of the surveyed grant holders indicated that they had planned or were working towards an international publication with the UK partners. Moreover, they were encouraged to lead the **organisation of workshops and conferences** in the home institutions:



**Our university [...] organised a conference wherein we got professors from the UK [...] as keynote speakers, to involve [...] a wider audience and different researchers [and] universities here in the Philippines.**

This practice exposed more researchers from Philippine HEIs to the findings and methodologies developed by the research group. The collaborations were perceived as so successful that most of the interviewees are exploring how to apply for further funding with their partner and continue the collaboration.

Being funded by the Newton Fund allowed recipients to participate in conferences and submit abstracts more than they would ordinarily.

The challenges in this section are not related to the Newton Fund per se, but to institutional issues in the Philippine HEI landscape. There is a general issue in **retaining talents in academia**: young researchers tend to leave for better paying jobs. In terms of capacity building arising from the Newton Fund, the tenured professors benefited from learning from overseas relations, whereas the students who were employed as research assistants left academia due to low wages for PhD and early career researchers. As one professor suggested:



**the problem with computer science students here in the Philippines, is that they would like to go to work, where the pay is higher. So, [after the Newton Fund was concluded] they went to industry, they did not join [...] academia.**

This is a structural problem that creates issues in terms of long-term capacity building among the younger generations in the Philippines.

The Newton Fund also allowed benchmarking of practices between the UK and the Philippines:



**we were able to visit [a university] in the UK and actually delve into the UK system of practices [...] that exposure provided us with a benchmark for our own training. And we realised that really the skills of our recent graduates would not equip you to be a GP... [In the Philippines, when] you have an MD and you've graduated from five years of medical school, you are a GP.**

The Philippines researchers realised that their training was too theoretical and lack in practical application, resulting in graduates not knowing how to apply their knowledge. By spending time in the UK and observing the educational system, the team realised that they needed to develop a new approach to teaching.

## 4.2 Contribution to Research Innovation

A clear issue among grant holders is the initial **understanding of impact**. At the interviews, all respondents admitted that they were unsure of what ‘impact of the research’ meant. They provided some input based on the idea of ‘extension’. In their universities, they were used to defining impact as ‘extension’, a term mostly focused on the commercialisation of patents and on commercial gains from the discoveries. Most of the grant holders affirmed that their project has a larger impact that initially planned.

With terminologies cleared, respondents noted, as they work with a UK team, the impact of the current allocation of staff in the rural areas working on **engagement with society** and especially supporting the **implementation of policies**, best practice and results from the studies. The research projects had also had an impact on **curriculum development** and how to conduct **training for undergraduate** and graduate students.

The analysis of the data collected for this report indicates that the Newton Agham Programme has strengthened research and innovation capacity in the Philippines, built strong and **deep partnerships between the UK and the Philippines**, and supported **and expanded the expertise and networking UK researchers** local institutions. In some projects, the outcomes also contributed to the **reduction of poverty** and the **likelihood of reducing gender inequality**.

In fact, most of the research conducted by recipients of the Newton Fund contributed to policy and community development and informed the curriculum transformation in the Philippines. However, these are not evaluated nor recognised by the academic system in the Philippines as an ‘impact on the society’, and academics do not get extrinsic recognitions for such achievements. For example, some

of the projects and tools have been used in other fields (e.g. medicine) to look for patterns of diseases and prevent them, but because they did not generate a patent, they did not count for academic recognition.

One developed a system to detect flooding using UK technology. The Newton Fund allowed an evacuation system to be put in place in one of the most affected areas of the country. The project was successful due to the partnership between and complementation of a leading university in Manila and a local university in the rural area. The local university knew the area and how to engage with the local community. The university in Manila had the support of UK partners, the research expertise and the technology to do the project. According to the grant holder from Manila, having a high-ranked research-focused university in the field can ensure ‘the integrity of the delivery of the project’. This provided the rural university an opportunity to collaborate and work on a research project.

Other projects focused on addressing developmental problems in the Philippines, including contributing to the achievement of the Sustainable Development Goals. For example, one project focused on the application of a recently approved law.



**Our study can inform the implementation of the law, particularly with regards to the preparation and the support for primary care physicians, particularly in remote and rural areas.**

Benchmarking against UK practices, one grant holder learned to **advise business owners** and the private sector on organisational practices, such managing staffing allocation. They have also developed stronger **links with the government**.

The impact of the Newton Agham Programme on the **research environment** has been significant and quite compelling, since in many projects it has created **long-term pathways of engagement**, which were not thought out at the beginning.



**I think it provides avenues for strengthening linkage with the national government because we intend to share these findings with them. Now, indirectly, this project will also inform our [...] growing involvement with industry, because essentially the school, attending a school of medicine and public health, is really positioning itself in health systems development [...] which really is developing ecology of primary care in the country.**



**But certainly, the engagement with the local government [in the rural area] will continue. The engagement with the Department of Health will continue. We could spin out another project that might drill down on actual implementation of certain interventions...**

Finally, all the interviewees concurred that they had learned how to manage projects and write grant proposals. With this new skill set, some were able to apply for additional funding while others will apply once their project is concluded.





## 4.3 Issues and Challenges

The main issues found from the survey were: financial issues (e.g. lack of funding from relevant government agencies, difficulties in accessing funds for a second phase of the project), accessing key stakeholders (e.g. end users of the innovation, research institutes), accessing policy makers for initiating policy dialogue, lack of engagement (e.g. with the local community or university because of lack of trust), lack of an innovative ecosystem, access to training for local researchers and local key partners, technological constraints, bureaucratic challenges, and lack of end user engagement.

During the interviews, additional areas of concern arose. The most problematic issue was the **delay in research funding from relevant government agencies**, which resulted in projects being delayed and not finishing on time. All the respondents pointed out that they had a lot of issues with CHED: all experienced delays in the release of the funding, which caused delays in the projects. There were also some issues with the UK partners because the project's timeline changed, causing it to be postponed.

In some instances, the project started coinciding with the new academic year, and UK academics could not commit.

Secondly, there was poor communication among teams with no history of collaboration. Communication was demonstrably better between the universities that had already collaborated before gaining the Newton Fund funding. If the research proposal was written by a UK institution (rather than co-created), it resulted: the country/local partner lacking a clear understanding of the project or the partner's capabilities and the local partner being perceived as a data collection-tool rather than a co-applicant of the project.

Another issue was related to the **slow approval** in the Philippines. Some of the respondents confirmed that there was a backlog in the hospitals in getting ethical clearance that caused delays in the project.





## Recommendations for the British Council to improve the Newton Agham Programme

**Figure 1:** recommendations for the British Council to improve the Newton Fund**For the British Council, key recommendations to improve the Newton Fund are to:**

Ensure that there are no delays in releasing the funding.

Ensure that the projects address the Strategic Development goals and the key priorities of the Department of Science and Technology and CHED.<sup>4</sup>

Showcase the funded project in conferences and Department of Science and Technology meetings.

Organise annual meetings with the project holders (similar to those organised by the British Academy) to exchange work practices and reflect on the research projects and project showcases.

Organise leadership training courses for newly appointed principal investigators.

Organise a mentorship programme for Newton Fund grant holders and principal investigators.

Create an impact reward for the work conducted in society.

Develop metrics and reports to create evidence on social value (e.g. returns in terms of improvements in knowledge; developing users; growth of local companies; and increases in employment for the community and economy).

Create a mechanism for grant holders to report research outputs, activities and impact, including findings on literature, methodology and papers written.

The British Council should adopt a wider definition of impact: not only commercialisation but also impact of the academic research on the local communities, on society, and on the government, as input to policy making and working on community development.

<sup>4</sup> Research Consulting and KE Metrics on behalf of the British Council, 'Opportunities, Models and Approaches For UK-East Asia Higher Education Partnerships to Deepen University Collaboration with Industry and Business Enterprise', 2019, [www.britishcouncil.ph/programmes/education/higher-education/university-links-industry-engagement](http://www.britishcouncil.ph/programmes/education/higher-education/university-links-industry-engagement), p42.



# Conclusion

This report on the Newton Agham Programme found evidence that particular practices in university-industry relationships were developed while doing the research grant. As well as learning about building relationships to support university-industry links, most of the Philippine grant holders acquired the knowledge to work on interdisciplinary and multidisciplinary projects, including learning new literature and methodologies.

The British Council in the Philippines has the opportunity to establish a comprehensive network to promote, display and publicly showcase the projects that are addressing the needs of the private and public sectors in the country. Locally, there is a need for leadership courses for new investigators and for principal investigators of research projects to enhance the leadership and project management roles of academics.

The report shows that the Newton Agham Programme has strengthened the research and innovation capacity in the Philippines by building strong partnerships between the UK and the Philippines. In addition, several projects have contributed to the efforts in reducing poverty and gender inequality.

**The British Council in the Philippines has the opportunity to establish a comprehensive network to promote, display and publicly showcase the projects that are addressing the needs of the private and public sectors in the country.**

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