

# **Call for Danida Mobility Grants for Research, 2017**

## **Application and Reporting Guidelines**

**Deadline: March 17, 2017, 12:00 hrs. (Danish Time)**

Danida Fellowship Centre  
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## **Introduction**

The Ministry of Foreign Affairs of Denmark (MFA) provides grants for development research activities as part of Denmark's international development cooperation. Within this framework, the MFA invites applications for individual Danida Mobility Grants to facilitate the creation and development of international networks and research collaboration through research stays in Denmark by researchers from the growth and transition countries included in the "Partnering with Denmark" programme: Bangladesh, Brazil, China, Colombia, Ghana, Indonesia, Kenya, Mexico, Myanmar, South Africa, Turkey, and Vietnam.

Deadline for this first call for applications is **March 17, 2017**. A second call for applications will be made later in 2017 depending on availability of funds.

Danida Fellowship Centre (DFC) manages the application process and the implementation of the mobility grant scheme on behalf of the MFA. The total budget frame for the scheme is DKK 5 million in 2017.

## **1. Objective**

The objective of the mobility grants is to support and strengthen the creation and development of networks and longer-term research collaboration between universities, research institutions, and private companies in Denmark, and in the growth and transition countries included in the "Partnering with Denmark" programme. The collaboration with the Danish researchers is thus central for the grants, and the research stays must aim at facilitating the collaboration between the institutions in the growth and transition countries and in Denmark within the areas of the strategic sector cooperation in each country.

## **2. Themes and conditions**

The mobility grant research must fall within the country-specific research themes defined in Appendix 1, which correspond to the themes of the call for research collaboration projects in growth and transition countries ("Window 2"), 2017.<sup>1</sup>

The mobility grants cover research stays in Denmark by researchers employed by a university or by a research-based institution (public or private) based in one of the countries included in the "Partnering with Denmark" programme.

The visiting researcher must hold a PhD or equivalent qualifications, documented clearly in the CV<sup>2</sup> and the researcher must be engaged in research within the country-specific theme selected for the research stay.

The application must be submitted by the Danish host institution, i.e. a university or a research based institution (public and private) in Denmark, or a Danish private company with a strong research profile. The Danish host institution must appoint a person (below termed "the project coordinator") within the

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<sup>1</sup> See <http://dfcentre.com/research/calls-for-applications/>

<sup>2</sup> It is regarded as equivalent to a PhD when it is documented in the CV that the applicant is at Professor, Assistant Professor, or Associate Professor Level.

institution to be responsible for organising the research stay in Denmark and to submit the application on behalf of the host institution and the visiting researcher.

A Danida mobility grant can only be awarded to a Danish host institution and must be used for coverage of the expenses related to the research stay. The host institution will be responsible for the management of the grant, see Section 6.

The duration of the mobility grant project can be up to one year; however, the duration of a research stay in Denmark covered by the mobility grant is limited to a maximum of 6 months. The maximum budget is DKK 250,000 (incl. of overhead to the Danish host institution) for each grant. The grant can cover only one researcher's stay in Denmark.

The outputs of the mobility grant project must include a plan for publications based on the research carried out during the research stay, as well as a plan for further collaboration between the institutions involved in the project (e.g. networking, proposal development, co-publications). During the research stay it is expected that the visiting researcher is integrated into the research activities at the host institution, and amongst others, co-hosts a joint research seminar within the scientific research field of the mobility grant project.

### **3. Assessment criteria**

The MFA (including embassies in the growth and transition countries) will assess the mobility grant project applications based on the relevance, including:

- How well-defined the focus of the mobility grant project is with respect to the announced research theme in the chosen growth and transition country;
- How the mobility grant project contributes to establishing research networks and collaboration between the institution in the growth and transition country and the host institution in Denmark;
- The potential for further research collaboration between the institutions involved;
- The qualifications of the visiting researchers within the scientific field selected for the mobility grant project.

In the selection, the MFA will consider an even distribution of mobility grants to researchers from the growth and transition countries, and will also aim to ensure a gender balance amongst the visiting researchers.

### **4. Application and appendices**

The project coordinator must apply electronically by filling in the electronic application form and upload the required documents as appendices to the application. The electronic application form is accessible from DFC's website via link <http://dfcentre.com/research/calls-for-applications/>.

The application must include a brief description of the mobility grant project, including:

- Expected outcomes and outputs in relation to network development and establishing research collaborations,
- The relevance of the mobility grant project to the country-specific research theme selected.

- Highlighted how the visiting researcher will be involved in the research activities/ environment at the host institution/in Denmark within the selected research field (co-hosting of joint research seminar, proposal development, co-supervision, lectures, etc.).
- Time schedule and activity plan for the mobility grant project.

In addition to the e-application form, the application must comprise the following appendices, uploaded along with the e-application:

- Appendix A: CV of the visiting researcher proving that the researcher holds a PhD or equivalent qualification.
- Appendix B: A signed agreement between the head of the Danish host institution (or department), the visiting researcher, and the institution of the visiting researcher (confirming the research stay in Denmark, including managing responsibility, plan for research stay, etc.).

Template for appendix B is available at link <http://dfcentre.com/research/calls-for-applications/>.

The application and appendices must be completed in English. The application must be completed by use of the correct e-application form, and for the appendix B, the template available must be used. The amount applied for must be within the limits and guidance specified in the Call. The application must contain all the required information and the appendices must be submitted as pdf files, with a total volume not exceeding 5 MB. The application must be submitted before deadline specified at the front page of this Call.

It is not possible to make corrections to an e-application, or to submit additional information, after an application has been submitted. Applications which do not include all required information and attachments will be rejected without further consideration.

### **Practical guidance to filling in the e-application**

Before the electronic application system is accessible, the applicant must register as a user with e-mail address and password – use the link “If you have *not* previously used Danida Fellowship Centre’s electronic application system click here”.

To create an application, select the application form “Danida Mobility Grants”. Once an application form is created, it is possible to save and break off from it and resume work at any time by accessing the “Edit” box at the log-in page to the right.

In case the password is forgotten, please type any password in the box, and an e-mail with the correct password will be sent to the registered e-mail address. By sharing the password, the visiting researcher can participate in the application process.

The instructions given in the electronic application form must be followed. All steps in the e-application form must be completed before the application can be submitted. The applying institution is responsible for ensuring that all information in the e-application is correct, that the required appendices are uploaded with the e-application, and that the contents of the appendices are correct.

Applicants will receive an electronic receipt notice by e-mail after the submission of their application. If the acknowledgement is not received within 24 hours, the applicant should send an e-mail to [research@dfcentre.dk](mailto:research@dfcentre.dk) to ensure that the application has indeed been received before the deadline.

Technical disclaimer: The DFC is obliged to inform prospectively applicants of any system errors that make the e-application system unavailable, affecting the applicant's possibility of submitting e-applications within any deadlines. Information regarding such unavailability, and other unforeseen events, will be posted on the DFC website <http://dfcentre.com/research/>.

DFC accepts no liability for incorrect information due to software errors, calculation errors, transmission errors and similar errors, or for any claims for damages due to incorrect use of the e-application system.

Data Protection Act: Danish privacy law (Danish Act on Processing of Personal Data, Lov om person-data, no. 429 of 31 May 2000 with subsequent amendments) accords the applicant certain rights when information concerning the applicant is processed electronically. Please note that the applicant has the right at his or her request, to inspect and verify personal data if such data are processed electronically.

### **Reviews of the applications**

All applications received within deadline will be reviewed by DFC for formal requirements. According to Section 4 of the Executive order on the granting function etc. under the Danish Council for Independent Research and the Danish Council for Strategic Research (Executive Order no. 322 of 30 March 2014) an application may be rejected without substantive consideration if the formal requirements or deadlines, as set out in this Call for applications are not met. Applicants rejected for not fulfilling the formal requirements will be informed.

The MFA will assess the relevance of the remaining applications with respect to the thematic focus area (refer to Section 3) and will prioritize among the applications received. The applicants will be informed of the MFA decision in April 2017. The approved projects can expect to start immediately after receiving and endorsing a Letter of Commitment. The research stay, on the other hand, can at the earliest be initiated 5 months after the deadline for application.

## **5. Eligible Costs**

The grant applied for must be indicated in the e-application form by overall budget lines. Only eligible costs and only expenses budgeted for in the application can be covered by the grant. The grant does not allow double coverage of any of the expenses.

DFC's administrative services must be used in arranging the practical details of the stay, see link <http://dfcentre.com/research/how-dfc-administers-research-projects/research-fellows/>. In connection with the research stay in Denmark, expenses for travel, accommodation and daily allowances can be covered. The expenses incurred by DFC are not subject to overhead.

In addition, the necessary costs to research materials and equipment and to communication and publication can be covered. Overhead/administration fees can be covered for the Danish host

institution.<sup>3</sup> Salaries for the visiting researcher or Danish researchers (including project coordinator) cannot be covered by the grant, and must be covered by the researchers' own institution.

The project period (maximum 12 months) can be used for further activities, e.g. publications and elaboration of the future collaborative activities, including applications for further funding.

## **6. Grant management, accounting, and reporting**

The Danish host institution will be responsible for managing the grant. The institution will thus be responsible for:

- The approved project activities are carried out;
- The outputs are achieved;
- The grant is used exclusively for the approved activities and expenses;
- The present guidelines are followed;
- The deadline set for reporting and accounting will be met;
- The budget is in accordance with rules and regulations of the institution;
- The required ethical and other approvals will be obtained before the start of the activities.

Information about the grant and project will be published in the Danida Research Portal, subject to the rules in the Danish Act on Processing of Personal Data (Act No 429 of 31 May 2000), see: <http://drp.dfcentre.com/>. In connection with all public communication concerning the grant, it must be informed that the grant is given by the MFA.

It is not possible to provide additional funding once the project is underway and overspending cannot be covered. Reallocation by up to 10% between the main budget lines can be made. All expenditures must be effectuated within the project period, as stated in the Letter of Commitment. DFC will deduct the expenses for travel, accommodation and allowances at DFC directly from the grant.

Within two months after the end date of the project the reporting and the accounts must be submitted to DFC by mail using the forms available at DFC's website.

Reporting form for mobility grants: The report must explain how the research stay has led to the anticipated and approved outcomes and outputs, both concerning the research and the collaboration with the Danish researchers, and include information about status for joint publication(s) as well as the plans for future collaboration.

Financial accounts form: Only expenses which appear in the approved budget can be covered. None of the budgeted expenses can be funded by other sources. Unspent funds will have to be returned to DFC. In case the reporting and accounting have not been submitted in time to DFC, it is considered as a violation of the conditions and a return of funds will be requested.

## **7. Information and contact**

For questions concerning the application procedures and project management, please contact the Research Unit at DFC at [research@dfcentre.dk](mailto:research@dfcentre.dk).

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<sup>3</sup> Maximum overhead rates must follow the General Conditions for ongoing projects, see: <http://dfcentre.com/wp-content/uploads/2017/01/General-Conditions-2017.pdf>.

## **APPENDIX 1**

### **Mobility grants to researchers from growth and transition countries – country-specific research themes:**

#### **Bangladesh – Occupational health and safety**

The ready-made garment industry in Bangladesh has grown very rapidly to become a key driver of economic growth. Garment exports account for over 80 percent of export earnings and the industry employs over 4 million workers of whom 55-60 percent is women. The loss of 1136 lives when the Rana Plaza collapsed in 2013 sent shockwaves around the world, coming shortly after a fire which killed 112 people at another garment factory. In the wake of these disasters business could not continue as usual. Fundamental changes relating to safety, inspection and compliance had to be made if the lives of workers were to be safeguarded and the confidence of global buyers retained. The amendment of the Labour Act in 2013 introduced the need for safety committees to be established in any factory with over 50 workers. The formation of these committees is currently being piloted and once operational they should make a major contribution to workplace safety. However, further result oriented research is needed to convince the employers to voluntarily engage in investing in occupational health and safety (OHS). The employers' federations have often asked for concrete evidence that better OHS would lead to higher productivity. In addition, other industries are expanding, such as the leather industry which could be the next major export sector. In this context research could be undertaken in the fields of both corporate social responsibility (CSR) and responsible sourcing.

#### **Brazil – Digital governance**

Digital innovation in public institutions is a component of the strategic sector cooperation programme between Brazil and Denmark. The aim is to study tools to generate ideas and develop radically new opportunities in a complex world. Forming new relations between people, information technologies (IT) and society constitute the basis for collaboration. Possible research areas include:

- digital governance and enterprise architecture;
- process innovation and new business models;
- using big data to improve governance;
- security in e-Government.

#### **Brazil – Health information technology (IT)**

Developing information technology (IT) in the health sector is included in strategic sector cooperation between Brazil and Denmark. Despite differences in income levels and organization, there are interesting similarities between the two countries that could be explored and would serve as common ground in a research project: the aging population, the rise in chronic diseases, hospital overload, increasing IT-readiness and the focus on home monitoring of patients. The public health services cater for 75 percent of the population in Brazil. With a vast population and higher than average level of urbanization, there is considerable scope for upscaling IT in health care services. Research is needed to explore the potential for IT use in the sector.



### **China - Water scarcity**

Water scarcity is an increasingly serious problem in large parts of China. Groundwater aquifers have been overused and in some areas literally emptied. All water sources have to be integrated in order to establish a sustainable water resource. By applying enhanced infiltration of excess surface water - especially floodwater - to the groundwater, the aquifers can be restocked and rehabilitated and at the same time floodwater that is normally wasted can be stored. This approach has the advantage that with efficient infiltration/injection, evaporation and water loss can be avoided. Suggested research could deal with:

- rehabilitation of groundwater aquifers;
- how the hydraulic and geological properties change after collapse of the aquifers, how the aquifer can be rehabilitated and if and how groundwater extraction can be re-established;
- the statistical assessment of geological and hydrogeological mapping in large areas;
- how to optimise infiltration in order to avoid evaporation and sediment clogging.

### **China – Animal manure as fertilizer**

A strategic sector cooperation initiative on resource efficiency within the agricultural sector is focusing on the application of animal manure to the soil as fertilizer. A well-structured research project in relation to manure handling or application could complement this effort. Investigations could, for instance, be undertaken to monitor fertilizer trials and analyse soil processes after applying animal manure.

### **China – Maritime and shipping**

Closer research-based cooperation between China and Denmark is being considered, in particular concerning green and more energy efficient shipping and shipbuilding. A Sino-Danish MoU on green maritime technology, shipbuilding and offshore equipment will be signed at the end of 2016. Several areas of research within energy-efficient shipping and shipbuilding are relevant. These include:

- fuel consumption and fuel content (Sox, NOx, methane, etc.);
- alternative fuels (LNG, DME, electrification etc.);
- more efficient engine and propeller design;
- marine coating such as antifouling paint;
- improved ballast water systems;
- ship design to reduce greenhouse gas emissions.

### **Colombia – Water resources**

Opportunities and constraints related to water resources are high on the agenda in Colombia. These have arisen due to:

- climate variation, for instance the phenomena of el niño (with warmer temperatures and drought) and la niña (more and heavier rain and storms);
- increased water pollution;
- the introduction of new legislation (with requirements for contingency planning, water treatment etc. in relation to both public and commercial activities).

Furthermore, the peace agreement and prospects for greater stability in the country mean that it will be possible to increase the geographical reach of improved sanitation, etc. Opportunities explored through strategic sector cooperation have focused on municipal wastewater treatment and water use in aquaculture. Clean tech possibilities could be further investigated through targeted research collaboration.

### **Colombia – Mental health**

Developing a national strategy to tackle stigmatisation is an important issue in mental health care in Colombia. Demobilised combatants together with others such as the LGBT community, drug addicts, people with infectious diseases such as HIV/AIDS and tuberculosis are all at risk of exclusion from society due to stigmatisation. This has resulted in a high prevalence of mental health problems within the group of conflict victims. With the implementation of the peace agreements it will be crucial to address this issue in order ensure successful reintegration. In this context research could be undertaken, drawing on the experiences of combatting stigmatisation in Denmark and underpinning the development and implementation of the national strategy as a means of improving mental health.

### **Colombia – Health care and use of medication**

In 2014 Colombia introduced a universal healthcare system, meaning that all citizens have the right to free medical attention. A strategic sector cooperation initiative has been developed to assist in making the right choices when defining the future of specific areas of the healthcare system. The financial sustainability of the system is a particular concern, with a focus on price controls for medicines and the rational use of medication. Rationalising the use of medication is a priority within the healthcare system. Research could be highly relevant in relation to the process of implementing a universal health care system.

### **Ghana – Maritime environment**

The Gulf of Guinea is the key trade route and a key livelihood resource for both Ghana and West Africa. Over the past decades trade has increased significantly and with several countries gaining lower-middle income status this trend is set to continue. At the same time oil exploration has begun in the Gulf. A key challenge, therefore, is to ensure that the economic potential of the Gulf of Guinea is realised in a sustainable and safe manner. Opportunities for strategic sector cooperation have focused on compliance with the regulations of the International Maritime Organisation (IMO), in which environmental issues concerning air pollution and ballast water treatment feature prominently. Research on the environmental impacts of maritime activities (such as shipping, oil exploration and fisheries) could improve the basis for policy making and legislation by local governments not only in Ghana, but across the West African region and complement the strategic sector cooperation initiatives.

### **Ghana – Safe navigation**

Not only trade and oil exploration are carried out in the Gulf of Guinea; fishing and piracy are two key issues for the region. Access to navigation and navigational warnings are challenges for all users of the maritime domain. Ensuring that users of the sea have access to safe navigation also means sustainable, safe jobs. Through strategic sector cooperation there is a focus on improving navigation with better piloting of vessels and the introduction of simple e-navigation solutions. These would give all users of the maritime domain, from artisanal fishermen to large commercial vessels timely warnings, e.g. of incoming bad weather or navigational hazards. Targeted research focusing on initiatives to improve safe navigation, e.g. ship monitoring, satellite based navigation or e-navigation would help to prepare not only Ghana, but the whole region for the expected growth in trade, where it is important to ensure the coexistence of commercial and non-commercial sailing. This collaboration would support sustainable economic growth and create jobs in the maritime domain.

### **Indonesia – Energy sector**

There are plans to increase power generation capacity in Indonesia by over 60 percent in the next five years, with a significant share from coal fired facilities. An increased focus on renewables and on energy savings can contribute to the objective of reducing greenhouse gas emissions by 29 percent by 2030. Intensifying the use of expertise pertaining to renewable energy and energy efficiency is a key component of strategic sector cooperation. Within this framework, activities have been developed around energy modelling, planning and integration. Further research on wind resource assessment modelling could complement these efforts. In addition, research into building construction, building codes and energy savings in buildings could be useful in order to deepen understanding of the critical issues and facilitate knowledge based decision making.

### **Kenya – Food safety**

Kenya has considerable potential as a food producing and exporting country, especially in the high-value dairy, fruit and vegetable sub-sectors. However, products often reach the market without sufficient attention to hygiene, contamination and residue levels, resulting in failure to comply with international standards and rejection by commercial operators. This is also a safety problem for Kenyan consumers. Research is needed that provides an assessment of microbiological and chemical hazards along the milk, fruit and vegetable value chains. Main hazards should be identified and characterized and innovative solutions to their control suggested. An inter-disciplinary approach is expected and should include studies of the knowledge, attitudes and practices of farmers and other actors in the food chain towards use of agricultural chemicals and hygiene.

### **Kenya - Green growth in the manufacturing sector**

A strategic sector cooperation initiative seeks to apply a circular economy based approach to manage production and residuals, as well as to assist in the introduction of new circular business models in the manufacturing sector. In particular, research is needed to analyze and identify opportunities, barriers and business cases for piloting the greening of industrial manufacturing and symbiotic practices between industries in existing and projected industrial parks. This research would encompass economic, organizational, institutional and technical considerations, including risks and assumptions of various models. The results are intended to provide substantial scientific knowledge that will underpin the multi-sectoral approach adopted through strategic sector cooperation and synergize with activities in general.

### **Mexico – Primary health care**

Strengthening primary health care is the focus of a strategic sector cooperation initiative and entails improving awareness of the importance of primary care and prevention of disease. Health literacy stands for the knowledge, motivation and competencies used by people to access, understand and apply health information for promoting better health outcomes. Limited health literacy affects the population's health outcomes and is associated with higher health system costs. Research on health literacy would be part of the effort to address the challenges in dealing with chronic diseases, consistent with the strategies promoted by the World Health Organisation.

### **Mexico – Mental health**

A small but important component of the strategic sector cooperation programme concerns mental health in Mexico. There is a need to increase awareness and understanding of the problems in this field. Opportunities exist in connection with the work undertaken at call and information centres dealing with psychiatry and mental health, where the concept of e-mental health has been developed. There is a particular focus on helping doctors to deal with patients suffering from depression. There are possibilities for investigation of a number of critical issues within the framework of research collaboration with national institutions.

### **Mexico – Energy planning and wind modelling**

There are opportunities for research in connection with energy system planning, regulation and modelling in Mexico. How to integrate intermittent sustainable energy sources such as wind and solar power within the energy supply system is an important issue. There is also a need for research in connection with multi-scale, model-chain evaluation for wind atlases in large regions. This would entail investigation of measurements and uncertainty estimations as well as modelling and control of wind power plants in the Mexican system, e.g. in terms of weak grids and dynamic modelling.

### **Myanmar – Labour market reform**

In 2011 the government of Myanmar initiated a comprehensive reform process aimed at achieving a more democratic, market-based and socially equal society with prosperity for all. Since 2014, labour market reform has been given priority with the explicit aim of promoting sustainable growth and development. At this point in the reform process, however, there is a need to better understand how the strengthening of labour market institutions can contribute to promoting sustained and inclusive economic growth, full and productive employment and decent work for all, including what are currently the barriers and potential drivers for realizing this potential. Particular focus in research should be given to small and medium-sized enterprises.

### **South Africa – Renewable energy**

The South African Renewable Energy Independent Power Producers Procurement Programme (REIPPPP) has been hailed as one of the most successful renewable energy procurement programmes globally. The programme has brought more renewable energy online in 4 years than the rest of sub-Saharan Africa has achieved in more than 20 years. Despite this achievement there remain various design and operational features of the programme that require further improvement. These include issues with grid integration of renewable sources, system adequacy for variable energy sources, opportunities for providing baseload through decentralized energy production from variable renewable sources such as wind, biomass and solar power, the opportunities for potential inclusion of time-based energy blocks, etc. In addition, there are many countries in sub-Saharan Africa that are planning to embark on renewable energy auctions in the next few years, presenting an important opportunity for South Africa's experience to be translated into valuable lessons for the rest of the continent through applied research. There are also important developments with regard to energy sector governance and institutional arrangements and renewable energy auction design in the rest of the world - specifically in the EU and including Denmark - that could inform successful renewable energy procurement programmes in South Africa and the rest of the continent.

### **South Africa – Water resources**

South Africa is a water scarce country and is currently facing a looming crisis due to a massive back log in water infrastructure maintenance and investment, due to recurrent droughts driven by climatic variation as well as due to deteriorating water quality. A water research development and innovation roadmap has been developed that identifies research and innovation needs and gaps. The roadmap indicates the following focus areas:

- Unlocking alternative sources of water with reuse, improved groundwater utilization, desalination and harnessing of storm water, where research needs include the assessment, monitoring and social dimensions;
- Exploring ecological (natural water bodies) and built water infrastructure, including landscape level assessment of ecological infrastructure as an alternative to building, the management of ecological infrastructure and “green” water balances (ecological flow assessments; river basin scale hydro-economics; reservoir, river and lake restoration);
- Ensuring greater water efficiency and reduced losses, with associated technical, institutional, operational and social behavioural challenges as well as next generation technology for water efficiency with industries, agriculture and households.

Additionally there is need for research into applicable water governance and costing approaches that can unlock the urgently needed water infrastructure investments, thereby making water a bankable business while ensuring the constitutional right to water and sanitation.

### **Turkey – Low-carbon heating and cooling**

Upcoming strategic sector cooperation aims to include a focus on energy efficiency and low-carbon energy generation. Roughly one third of the energy consumed in Turkey is today used for heating and cooling purposes. The authorities are aiming to promote the use of energy efficient heating and cooling systems. Currently, heat is mostly provided in building-level heating systems and most systems use fossil fuels. Relatively few district energy systems are found while combined heat and power is almost only applied in industry. Research is needed to explore opportunities for developing low carbon solutions in these sub-sectors.

### **Turkey – Waste management**

Waste prevention, sorting and recycling as well as wastewater sludge management are likely to be included in an upcoming a strategic sector cooperation initiative. Currently waste generation and waste management practices in Turkey give rise to significant environmental problems. About half the population does not have access to any waste disposal or recovery systems and about 40 percent of the municipal solid waste is dumped into open sites. Thus a first priority - in harmonisation with EU directives - will be to close old dumpsites and establish sanitary landfills to protect the soil and underground water and to reduce the environmental impacts. Due to expansion of sanitation and wastewater treatment systems, there is an urgent need to develop effective plans for the utilisation of efficient technologies and processes to deal with the increasing amounts of sludge. Targeted research could make an important contribution to tackling the problems. Finally it would make sense to take a close look at waste-to-energy capabilities around the world that are relevant for Turkey.

### **Turkey – Renewable energy**

The authorities are looking at how to reach ambitious renewable energy targets while maintaining a high level of energy supply security. New legislation is to be drafted including a reassessment or re-design of the current financial support framework. In this context, the tendering procedures and permit requirements and procedures will be reviewed. The review will include all electricity generating technologies including wind power, solar power, biomass and biogas power and cogeneration as well as geothermal power. In addition, promotion policies for non-power renewable technologies will be reassessed. The new law should align support schemes with EU regulations. In addition, efforts are underway to examine how the electricity grid can be made ready to handle significantly more renewable energy than currently is the case. Research could complement the strategic sector cooperation in these spheres.

### **Vietnam – Green industrial production**

An important focus of strategic sector cooperation is on industrial emissions, including compliance with environmental laws and pathways to greener industrial production. A key challenge is that the majority of industrial enterprises in Vietnam are small or even micro-scale, and there is a need for research to provide an understanding of how these enterprises may be helped to adopt more efficient, environmentally friendly and economically viable business models, including through innovation and the introduction of more efficient resource flows and circular economy concepts. It is recommended that the research be inter-disciplinary and include analysis of the role of relevant stakeholders in achieving behavioural change as well as focusing on innovative solutions that will work in the Vietnamese context.

### **Vietnam – Food safety**

Strategic sector cooperation includes a focus on food safety in the pig value chain. A key concern is the routine use of antibiotics and other compounds to manage diseases in order to achieve productivity and biosecurity outcomes. Research is needed to help establish prudent use practices consistent with a "one health" approach. This would include determining the actual disease risk and status, current usage patterns and the prevalence and risk of antimicrobial resistance with a view to making recommendations on pathways to improved disease prevention and control practices. It is recommended that the research be inter-disciplinary, include an analysis of the role of relevant stakeholders in achieving behavioural change and focus on developing innovative solutions that will work in the Vietnamese context.

### **Vietnam – Health care**

The prevention and treatment of non-communicable diseases (NCDs) in primary healthcare is in focus through strategic sector cooperation. In Vietnam, as in many low and middle-income countries, the existing healthcare system is oriented towards infectious diseases. As a result, the system is poorly equipped to handle the growing prevalence of NCDs. There are direct consequences for especially for the poor, who are affected by the diseases and by lack of access to prevention and long-term care. A reorientation of the healthcare system with investments into prevention and treatment of NCDs at the primary level and with new attention to patient self-care and involvement is underway. An essential prerequisite for success in this field is knowledge on how NCDs are experienced and handled by patients, relatives and healthcare professionals. Currently, there is a very limited amount of research on NCDs in Vietnam. This hampers the ability to improve the responses by authorities and healthcare providers in effectively improving the healthcare system.