



Cuba Strategy Document

As discussed by the Bureau UOS
on 20 December 2011

Table of contents

| | |
|---|-----------|
| Foreword | 2 |
| Acronyms | 5 |
| 1. Introduction | 7 |
| 1.1. <i>General info</i> | 7 |
| 1.2. <i>General info</i> | 8 |
| 1.2.1. Food security | 8 |
| 1.2.2. Agricultural sector reform | 8 |
| 1.2.3. Environment and climate change | 8 |
| 1.3. <i>The Cuban higher education system</i> | 8 |
| 2. Country Strategy | 10 |
| 2.1. <i>Background</i> | 10 |
| 2.1.1. Cuba country strategy formulation process | 10 |
| 2.1.2. Higher education and research: policy environment | 11 |
| 2.1.3. Cuban Ministry of Higher Education's views on strategic directions for Flemish University Cooperation | 12 |
| 2.2. <i>Views and themes expressed (based on survey, interviews and seminar, and mission and seminar)</i> | 13 |
| 2.2.1. Expressions of interest by the Flemish (academic) stakeholders | 13 |
| 2.2.2. Expressions of interest by the South (government and academic stakeholders) | 14 |
| 2.3. <i>Strategy framework and implementation</i> | 16 |
| 2.3.1. Areas of focus (thematic, regional, partners): | 16 |
| 2.3.1.1. Regional focus | 16 |
| 2.3.1.2. Themes | 16 |
| 2.3.1.3. Transversal needs and opportunities | 18 |
| 2.3.2. Country Strategy Framework (strategic niche resulting from the above) | 20 |
| 2.3.3. Collaboration within networks | 25 |
| 2.3.4. Partnership modalities (portfolio of intervention types) | 25 |
| 2.3.5. Non-academic partners and stakeholders | 26 |
| 2.3.6. Contribution and opportunities for Flemish non-university HE institutions | 27 |
| 2.4. <i>SWOT analysis of a VLIR-UOS strategy with Cuba</i> | 28 |
| ANNEXES | 30 |

Foreword

The process of country strategy identification and IUC selection was rolled out by VLIR-UOS in the context of the implementation of the political agreement signed in 2010. This agreement necessitates VLIR-UOS to formulate a strategy for each of its 20 VLIR-UOS partner countries. This will be done in a phased manner, Cuba being one of the first six countries for which a strategy will be formulated by the end of 2011. Identification missions were conducted by country teams consisting of two experts (one international and one local expert), a member of the Bureau UOS and the VLIR-UOS country desk officer.

A VLIR-UOS strategy represents an informed policy choice that serves as a framework for programming. This framework must be sufficiently broad in order to ensure that a sufficient number of quality partnerships can be formed and projects formulated on the basis of the VLIR-UOS operating modalities. However, the means of VLIR-UOS, both in terms of financial and human resources, are limited. For this reason, a relatively broad strategy may result in a modest programme.

VLIR-UOS funds partnerships of willing academics (Flemish academics offer their time on a voluntary basis) on themes that are developmentally relevant and result from a shared interest. Interventions may be in the form of scholarships or projects at institutional or sub-institutional level. Capacity development aimed at furthering the ability of HE institutions to serve as actors in development, is at the centre of the VLIR-UOS programme.

Country strategies are policy documents that will guide funding decisions of VLIR-UOS and allow for strategic impact based on programme coherence and contextual relevance.

Time frame and content

The development of academic capacity requires a long term framework that often goes against the current policy dynamics that are characterized by constant changes and shifts at the international and country level in both North and South.

Therefore, VLIR-UOS has opted for a strategic framework covering 12 years. This may seem long but merely represents one or two programming cycles in case of the budgetary more significant VLIR-UOS intervention types. Obviously, contextual changes (national policies, donor positions, VLIR-UOS (country) priorities etc.) may necessitate interim changes.

Also, the 12 year timeframe should be seen as a guideline given a more 'evolutionary' approach whereby every 6 years a strategic review will be made, if possible coinciding with the 6-year strategic programming of VLIR-UOS to DGD. A more explicit re-formulation will occur every 12 years. As a principle, abrupt strategic re-orientations will be avoided as this undermines the need for predictability and long term visioning, in particular at the level of the academic communities concerned.

As for content, strategies are meant to focus on academic and societal needs that match with the interest and expertise that can be offered by Flemish higher education institutes. This focus may be conceptual and/or region based with due consideration for the importance of possible themes put forward by ongoing IUC partnerships. In all cases, however, it must allow for multidisciplinary inputs. VLIR-UOS indeed favours holistic approaches

Ownership and legitimacy

A country strategy is the result of numerous inputs and consultations with a wide spectrum of actors in Flanders and 'Country'. The strategy draws legitimacy from the lengthy consultation and formulation process. Eventually, however, it is a VLIR-UOS policy document.

While fully funded by the Belgian government, VLIR-UOS is not obliged to align itself with the Belgian bilateral cooperation programme, in those VLIR-UOS partner countries that also are Belgian partner countries. In terms of its strategic orientation and priorities, VLIR-UOS is therefore fully independent.

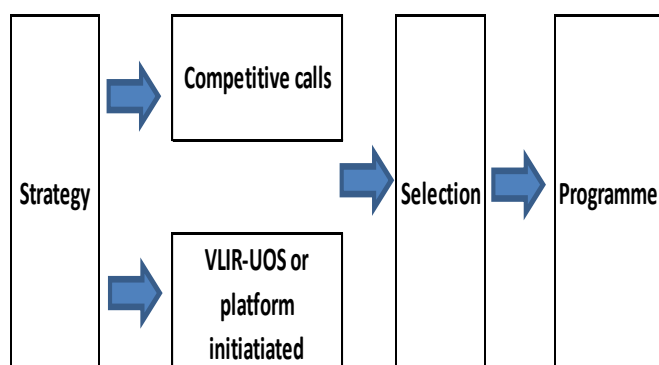
The country strategy as overriding reference

VLIR-UOS embraces project funding through open competitive calls and a merit and quality based selection. However, calls for proposals will make reference to the respective country strategies. Given sufficient quality, proposals will be further evaluated and ranked in terms of their possible contribution to the strategic framework. This may include considerations of strategic areas that are relatively over or underserved.

A country programme

VLIR-UOS has defined an indicative country budget that allows for a translation of this strategy academic partnerships and related initiatives through competitive calls and need/opportunity based interventions. The totality of the selected and funded projects represents a country programme for which VLIR-UOS in turn receives funding of the Belgian government on the basis of successive action plans each covering 3 years. VLIR-UOS oversees project implementation by the academics concerned, and reports to the Belgian government in terms of the (country level) results achieved.

However, in terms of fundable initiatives, VLIR-UOS relies on the response of the academic partners, and in most cases the academics of Flemish higher education institutes, to respond to such calls.



Country level objectives and results

VLIR-UOS facilitates academic partnerships and related initiatives within the context of a long term country strategy with a general objective. The portfolio of funded VLIR-UOS initiatives in 'country' will contribute to attaining this objective, and represents a result in itself.

Furthermore, VLIR-UOS has defined a range of indicators (Key Result Areas - KRAs) on the basis of which individual initiatives are expected to report. Such KRAs conform with standard academic benchmarks. Apart from objective key result areas such as publications and degrees being awarded,

VLIR-UOS also tracks more qualitative results. The accumulated indicators for the whole of the funded country level initiatives, henceforth represent actual results that qualify the objectives.

The building of academic capacity is central to the work of VLIR-UOS. However, such capacity is expected to generate knowledge and insights as well as applications that when adopted could result in 'changing lives'. This dimension is obviously much more difficult to capture, but VLIR-UOS hopes to identify trends through interim country level evaluations.

Acronyms

| | |
|-----------|---|
| AECID | Agencia Española de Cooperación Internacional al Desarrollo |
| ALBA | Alianza Bolivariana para los Pueblos de Nuestra América |
| CAELTIC | Centre for Advanced English Language Training for International Collaboration |
| CAPES | Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Brazil) |
| CENSA | Centro Nacional de Sanidad Agropecuaria |
| CIDA | Canadian International Development Agency |
| CIDEM | Centro de Investigación y Desarrollo de Estructuras y Materiales |
| CIGB | Centro de Ingeniería Genética y Biotecnología |
| CIM | Centro de Inmunología Molecular |
| CIMAGT | Centro de Investigación para el Mejoramiento Animal de la Ganadería Tropical |
| CITMA | Ministerio de Ciencia, Tecnología y Medio Ambiente |
| CNIC | Centro Nacional de Investigaciones Científicas |
| CNPq | Conselho Nacional de Desenvolvimento Científico e Tecnológico (Brazil) |
| COSUDE | Agencia Suiza para el Desarrollo y la Cooperación |
| CTG | Close the Gap |
| CUC | Cuban convertible pesos |
| CUJAE | Ciudad Universitaria José Antonio Echeverría (see also ISPJAE) |
| CUP | Cuban non-convertible pesos |
| EEPFH | Estación Experimental de Pastos y Forrajes "Indio Hatuey" |
| EU | European Union |
| FAO | Food and Agricultural Organization of the United Nations |
| GIS | Geographical information system |
| HE | Higher education |
| HEI | Higher education institution |
| HRD | Human resources development |
| ICA | Instituto de Ciencia Animal |
| ICT | Information and Communication Technology |
| IFAL | Instituto de Farmacia y Alimentos |
| IFS | International Foundation for Science |
| INCA | Instituto Nacional de Ciencias Agrícolas |
| IPK | Instituto de Medicina Tropical Pedro Kouri |
| ISPJAE | Instituto Superior Politécnico José Antonio Echeverría (see also CUJAE) |
| IUC | (VLIR-UOS) Institutional University Cooperation |
| JAN | Junta de Acreditación Nacional |
| KU Leuven | Katholieke Universiteit Leuven |
| MDG | Millennium Development Goals |

| | |
|----------|---|
| MES | Ministerio de Educación Superior |
| MINCEX | Ministerio de Comercio Exterior, Inversión Extranjera y Cooperación |
| MINED | Ministerio de Educación |
| MINSAP | Ministerio de Salud Pública |
| NGO | Non-governmental organisation |
| OHCH | Oficina del Historiador de la Ciudad de La Habana |
| PCM | Project Cycle Management |
| UC | Universidad de Camagüey |
| UCF | Universidad de Cienfuegos |
| UCMH | Universidad de Ciencias Médicas de La Habana |
| UCI | Universidad de Ciencias Informáticas |
| UCLV | Universidad Central de Las Villas |
| UDG | Universidad de Granma |
| UG | Universidad de Guantánamo |
| UGent | University of Gent |
| UH | Universidad de La Habana |
| UHOLM | Universidad de Holguín Oscar Lucero Moya |
| ULT | Universidad de las Tunas |
| UMCC | Universidad de Matanzas Camilo Cienfuegos |
| UNAH | Universidad Agraria de La Habana |
| UNDP | United Nations Development Programme |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNICA | Universidad de Ciego de Ávila |
| UNISS | Universidad de Sancti Spíritus |
| UO | Universidad de Oriente |
| UPR | Universidad Pinar del Río |
| USD | United States dollar |
| VLIR | Vlaamse Interuniversitaire Raad (Flemish Interuniversity Council) |
| VLIR-UOS | VLIR University Development Cooperation |
| VUB | Vrije Universiteit Brussel |

1. Introduction

1.1. General info

The Republic of Cuba is a free socialist, sovereign, and collective State. Cuba is an archipelago located in the western- most part of the Caribbean Sea, comprising the island of Cuba, the Isla de la Juventud, and some 1,600 smaller islands and keys, for a total land area of 110,860 km². Cuba is the largest island of the grouping of the Caribbean, situated west of Hispaniola island (Haiti and the Dominican Republic), and 145 km south of Key West, Florida (US).



Cuba is divided into 15 provinces and 1 special municipality (Isla de la Juventud). The former province of La Habana was recently (2010) divided into 2 new provinces: Mayabeque and Artemisa. 75.8% of Cubans live in urban areas. In recent years, population growth has slowed significantly. Cuba is characterized by uniformity in the geographical distribution of its population and the variables that comprise it. The central provinces and the capital have older populations.

For more information on the country we refer to the [Country Fact Sheet](#) and [Identification Mission Report](#), available on the VLIR-UOS website.

1.2. General info

1.2.1. Food security

Food security has been declared an issue of national security. The effects of the 2008 hurricanes, the rapid and sustained increase in international food prices, the lack of foreign currency both for imports and for food production inputs, and energy constraints have contributed to ensure that increasing national food production, especially by using endogenous resources and appropriate (low-input) technologies, is a national overarching priority. In this context, a series of measures are gradually being put in place to increase food production by small-holders, as well as improving its efficiency and quality.

1.2.2. Agricultural sector reform

As such a reform of the agricultural sector is crucial in order to ensure the sustainability of the process. Main challenges are modernisation, diversification and increase of production. A further difficulty is the economic sustainability of food production in a double currency system. Whereas 60% of inputs are obtained in CUC, by state decree, 90% of sales are in (non-convertible) CUP, thus providing little economic incentive to farmers and cooperatives. Given the above, the sustainable expansion of food production in the Cuban smallholder agricultural sector will primarily depend on the capacity of the Government to facilitate access to inputs (for production and processing) and credit.

1.2.3. Environment and climate change

Economic growth and the promotion of a sustainable and equitable social development, while safeguarding the environment and rationalising the use of natural resources, are at the very heart of Cuba's national policies. However, although Cuba has the knowledge, the human capacity and a clear understanding of its needs and priorities, it lacks the financial resources to expand its efforts and to undertake further environment-related studies and investments in key sectors.

1.3. The Cuban higher education system

The Cuban higher education (HE) system comprises 68 HEIs (not including military universities): these include 47 universities, 9 higher institutes, 8 schools/academies and 4 independent faculties. All HEIs are public. The Ministry of Higher Education (MES) is responsible for policy in matters of undergraduate and postgraduate education. It controls teaching, methodology, courses and programmes and the allocation of student places. MES is also responsible for the evaluation and accreditation of the whole university system but only 17 institutions are directly under the control of this Ministry.

Figure 1: Distribution of Cuban HEIs by Province



A significant number of HEIs are under the control of other state bodies, such as the pedagogical institutions that belong to the Ministry of Education (MINED), in charge of primary, secondary, technical and vocational education, or the medical sciences institutions belonging to the Ministry of Public Health (MINSAP).

A University System Accreditation Programme (SUPRA) was established in 1999, implemented by a National Accreditation Board - Junta de Acreditación Nacional (JAN). The Board grants the different categories of accreditation to evaluated academic programmes and institutions.

Four basic principles underpin HE in Cuba, namely:

- 1) a broad profile curricula, with two leading ideas:
 - a. the combination of instruction and education,
 - b. a close link between studies and work;
- 2) continuing education in all fields of knowledge;
- 3) research as an integral part of the university mission;
- 4) university extension (that is, into the local communities) as the integrating process of university work.

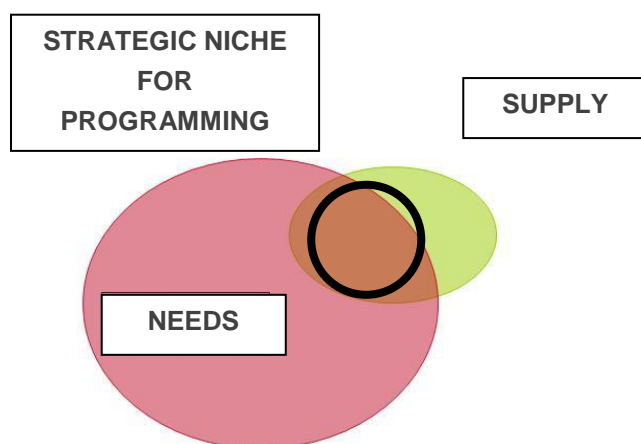
Since the year 2000 significant moves have been made to broaden access to HE for the least favoured social sectors. These initiatives include HEIs opening a number of university extension 'campuses' throughout all municipalities to increase access and reduce the dropout rate among working and part-time students, accompanied by investment in distance education methods and modalities. A close relationship is maintained between HE and all of Cuban society, particularly with local communities, for whom undergraduate and postgraduate programmes are offered to meet the needs of a specific productive sector or of a given region.

2. Country Strategy

2.1. Background

2.1.1. Cuba country strategy formulation process

In the past months, the Flemish areas of interest in working with Cuba have been captured (supply side). The planned identification mission, is meant to identify the needs (demand side) and identify (thematic, regional, institutional) the space and opportunities for both to match. Need identification will be done through visits to pre-selected HE institutions, authorities and other stakeholders. In addition, the hosting of a local seminar will allow for further inputs and discussions.



The preparatory work consisted of a survey of Northern and Southern institutions and a desk study of various Cuban and international (policy) documents. Among other, The Ministry of Higher Education (MES) –international cooperation department (DCI), the Ministry of Foreign Trade and International Cooperation and investment (MINCEX) were contacted, as also a number of Cuban partner institutions. Also, VLIR-UOS could draw on the findings obtained during 2010 monitoring missions (Universidad 2010, IUC UCLV follow-up mission) on the occasion of which various stakeholders, including MINCEX and MES-DCI were visited. In addition, a “Country Day” was organised in the context of an UCLV steering committee meeting in Brussels in June 2011 during which country-level discussions were held with representatives of the Cuban Embassy in Brussels. Early September 2011, further contact on the country strategy identification process was made with the Cuban Embassy in Brussels, the Belgian Ambassador in Cuba, representatives of EU DEVCO – Latin America and of the EU delegation in Havana. For Cuba, Belgium and in particular VLIR-UOS is the lead agent in terms of aid for higher education.

All the information collected, including the results of a survey among academic stakeholders in Flanders resulted in a Cuba Fact Sheet, including thematic/geographical overviews of present VLIR-UOS cooperation as compared to national and HE priorities. This document, as well as further information on the preparatory work can be found on the Cuba webpage.

2.1.2. Higher education and research: policy environment

Strategic focus on national development priorities

Research in HEIs and university research centres is required to contribute directly to Cuban socio-economic development, characterised by MES¹ as requirements to produce

- Strategic results for high value-added and high-impact exportable production
- Technological developments and results that apply technology for more competitive traditional production
- Innovative technological results to develop and revitalise local and industrial economies.

In MES strategic planning to 2015² the priority areas for institutional international cooperation match the broad national development priorities and are:

- Higher education and ICT
- Biotechnology and medical equipment
- Agribusiness and the environment
- Industry and energy
- Basic and social sciences

Also in line with national development priorities, MES places emphasis on the development of institutional capacity, doctoral programmes and research and innovation in institutions in the Eastern region of Cuba, although activities supported by international cooperation in Eastern institutions would also benefit other MES HEIs in the national network (see later in the strategy analysis).

Collaboration and networking in HE and research

Academic and research collaboration, including joint curriculum development for masters course, information sharing and skills transfer, is one of the strengths of the Cuban HE system, and indeed is a mandatory requirement for MES institutions. MES HEIs are all part of a MES university network (“Reduniv”) and there are also thematic networks maintained by individual HEIs on behalf of the academic and research community, such as the “RedMa: Portal de Medio Ambiente” (an Environment portal) maintained by ISPJAE³.

Collaborative activities, beyond information sharing through intranet and web-based networks, email and occasional meetings, are seriously constrained by lack of funds to cover travel costs and poor national and local transport infrastructure. Apparently recent changes in the regulations have been initiated that should make it possible for HEIs and staff to be remunerated (in cash or in kind) for their work supporting network activities and on behalf of institutions other than their own.

¹ La educación superior en Cuba. Presentation by MES at the VLIR-UOS Seminar, Havana 17th October 2011

² *ibid*

³ http://redma.cujae.edu.cu/articles.php?article_id=2

The impact of budget deficiencies on infrastructure and facilities

MES provides HEIs with budget allocations for staff salaries, running costs (electricity, water etc) and maintenance of buildings. These budgets have been declining in real terms for a number of years at the same time as the number of university sites has been expanding (for example, the development of outreach campuses and sites within municipalities). Most of those HEIs visited by the Country Team face significant challenges, such as:

- The maintenance and repair of campuses and buildings (many built during the 1970s): wear and tear from the weather is evident everywhere and aging furniture and facilities in constant use cannot be easily replaced or upgraded.
- Reliance on outdated and/or inadequate equipment and materials, for instance, in technical workshops and science laboratories, in library books and other materials for students, in computing hardware for administration, study and research.

Capital or special project investment funding is rarely available for those HEIs controlled by MES (and almost certainly other ministries such as MINSAP), unless it comes in the form of international cooperation or through other international donor initiatives.

2.1.3. Cuban Ministry of Higher Education's views on strategic directions for Flemish University Cooperation

Directors from MES set out and reinforced the Ministry's favoured strategic directions: these included

- Reiterating the national development role of HEIs in Cuba and the particular developmental priority of institutions in the Eastern region.
- Emphasising the main thematic priorities of a) reducing food security risks and dependencies on importing food; and b) the environment, in particular introducing renewable energy sources, and biotechnology, with a particular local role for universities to address specific and locally relevant environmental issues, such as water.
- Reinforcing the human resource development aspects of international cooperation and the need for a programme to make a significant impact on raising both capacity and capability (teaching and technical) in key areas. Mobility for academic staff is the priority, especially for those young academics with Masters qualifications but few opportunities to study for their PhD.
- Stressing the need for any programme of activities to take advantage of, and spread benefits through the national HE and research network infrastructure. It was acknowledged, however, that network connectivity (both intranet and internet access) is not evenly or equally distributed among HEIs, and that institutions in the Eastern half of the country face greater connectivity challenges than those in, for instance, Havana.
- Improving skills, competences and facilities for the application of ICT within key thematic areas, such education, environmental sciences and medicine, is also a MES priority. It was suggested that this could be supported through a national programme of doctoral and / or masters scholarships in applied computer studies.

2.2. Views and themes expressed (based on survey, interviews and seminar, and mission and seminar)

2.2.1. Expressions of interest by the Flemish (academic) stakeholders

In terms of subject areas/themes, the following clusters of Flemish interest have been identified: (1) Biodiversity, (2) Public Health, (3) Computer Sciences, (4) Culture and Development. All of these themes can also be closely aligned with regional priorities (more attention for the East of Cuba) and to rural development. Language& communication, ICT and statistics come forward as clear transversal support areas where a more crosscutting approach, in some cases using UCLV or other institutions as a 'hub' could be an opportunity.

Flemish universities and individual academics have been engaged in collaboration and human resource development initiatives in Cuba since 1996. With the start of the UCLV IUC programme in 2003 the level of activity has significantly increased.

Table 1: Summary of existing Flemish cooperation in HE and research⁴

| | SUB-THEMES/AREAS | Regions | Partners |
|---|--|--|---------------------|
| CONTENT BASED THEMES | | | |
| FOOD SECURITY & AGRICULTURE | Rural development and soil systems | Western Cuba - Pinar del Rio, Havana and Matanzas Province, Eastern Cuba | UNAH, UDG |
| | Food production and food chain Plant and animal sciences | Vila Clara, Sancti Spiritus | UCLV, UNICA, CIMAGT |
| ENVIRONMENT | Clean Technologies, Biofuels, Renewable and efficient energy | Cienfuegos and Sancti Spiritus | UCF, UNISS, ISPJAE |
| | Climate Change, Water and basic sanitation | Pinar del Rio/Havana Province | UNAH |
| | Environmental issues | Cienfuegos and Vila Clara | UCF, UCLV |
| Economic and social development, cultural issues | Cultural heritage - revitalization of botanical garden | Vila Clara | UCLV |
| HEALTH | HIV/Aids | Havana and Cuba | IPK |

⁴ From PDL's presentation at National Seminar, 17th October, Havana

| | | | |
|---|--|---|------------------------|
| | Pharmacology, drug testing , medicinal plants | Havana and Vila Clara | IFAL (UH), UCLV, CIDEM |
| | Medical statistics | Havana | UH |
| SERVICE/SUPPORT BASED INSTITUTIONAL THEMES | | | |
| Institutional strengthening | Research policy and culture (incl. statistics for research) | Havana and Vila Clara | UH, UCLV |
| | Educational policies (QA, accreditation, language and communication) | Vila Clara | UCLV |
| Information culture and management | Library and information culture development | Santa Clara (+ national for library automation) | UCLV |
| ICT | ICT in education (E-learning & other) | Vila Clara (+ national for free software) | UCLV |
| | Computer sciences & ICT infrastructure | Santa Clara | UCLV |
| | Computer sciences & ICT infrastructure | Santa Clara | UCLV |

2.2.2. Expressions of interest by the South (government and academic stakeholders)

Ministry of Higher Education (MES)

MES highlighted the special role of higher education (HE) in the implementation of the economic changes defined during the recent Congress of the Cuban Communist Party (2010). One of the main missions of the HEIs will be human resource development for properly implementing the new economic and social development policies until 2015. Another important mission in this period will be assistance to local governments in the management and implementation of their policies on local development.

The main thematic priorities indicated by the MES are: **agro industry and food security, environment, water and soil management, natural and public health disaster prevention, industry and energy, biotechnology, pharmaceutical industry, local development and housing development.**

From the MES viewpoint the core of the funds should be allocated to foster the development of the Eastern region through the implementation of an IUC Programme with similar impact as the one implemented in UCLV and of national networks on priority scientific fields such as: food production and food security (more details on proposed partners are included in the Identification Mission report).

Next to this also the classical Own Initiatives and South Initiatives projects should be maintained and the possibility of adding a strategic scholarships programme was considered very interesting.

It was emphasised that HE is responsible for 50% of the scientific results and 20% of the innovation of the country. For the improvement of these indicators, the officials mentioned the necessity of prioritising PhD Programmes (with an MSc incorporated in the first phase) that reinforce the research activity in the universities as well as their innovation and technology transfer capacity.

The improvement of research Infrastructure and ICT in the HEI networks were also indicated as the main priorities for raising standards and quality in HE. These are considered as the major technological problems of Cuban HEIs and, in general, they are addressed by all international cooperation projects that include a budget line for equipment.

It was recognised that a major constraint on the sustainability of the HE system is the salaries of the teaching staff which are not competitive in the labour market. There is a significant age gap in the teaching staff of the Cuban HEIs, in which more than 55% of the staff are younger than 35 years old or older than 60.

Regarding international cooperation, VLIR-UOS was acknowledged to be the largest single international cooperation donor in HE, in terms of both funding and length of engagement with Cuban HEIs. The following countries/institutions were mentioned among the other donors to the Cuban HEIs: AECID (Spain), COSUDE (Switzerland), CIDA (Canada), CAPES and CNPq (Brazil) and bilateral cooperation with the higher education systems of Mexico and Venezuela as well as other member states of the Alianza Bolivariana para los Pueblos de Nuestra América (ALBA). In general, most of the international projects implemented by Cuban institutions have as main outputs the fostering of academic and scientist mobility.

Ministry for Foreign Trade, Investment and Cooperation (MINCEX)

Also MINCEX confirmed that the biggest national thematic priority is food production. As Cuba imported around the 80% of the food consumed by its population, the government considered essential the fostering and consolidation of its national agricultural system, including the emerging private sector (cooperatives and individual producers). It was also confirmed that the Eastern region is the national geographical priority because of its relative poverty.

It was acknowledged that among constraints on the implementation of international projects include

- the lack of availability in the national market of products and services that may be required during the project implementation;
- the inconvenience of currency exchange; and
- the lack of flexibility of the Cuban financial system considering it is necessary to include international funds in the annual budgets of the institutions if they are to be accessed for project implementation.

MINCEX confirmed its intention to facilitate the implementation of new VLIR-UOS projects in Cuba and suggested the possibility of creating a Committee comprising representatives from VLIR-UOS, MES and MINCEX for the periodic follow-up of projects and trouble-shooting solutions to minimize these identified constraints and problems.

2.3. Strategy framework and implementation

2.3.1. Areas of focus (thematic, regional, partners):

Regional focus

The Country Team was given the strong steer from government (MINCEX and MES) that the priority for development through future international cooperation should be among HEIs in the Eastern provinces of the country – that is, Camagüey, Las Tunas, Holguin, Granma, Santiago de Cuba, Guantanamo. Given also the highly collaborative nature of HE within Cuba, however, this regional focus on the East does not rule out the inclusion of strong specialist partners from among HEIs and research centres in other parts of Cuba in projects and cross-cutting programmes of cooperation with Flemish institutions.

The needs of HEIs in the Eastern region for greater internationalisation and human resource development through international cooperation programmes are evident even without the strong governmental steer. HEIs in Havana City and the (former) province of Havana are disproportionately advantaged in comparison with more distant institutions, in terms of many of the factors that attract international interest and engagement; for instance, transport and telecommunications infrastructure, links with Ministries and other government agencies in the capital.

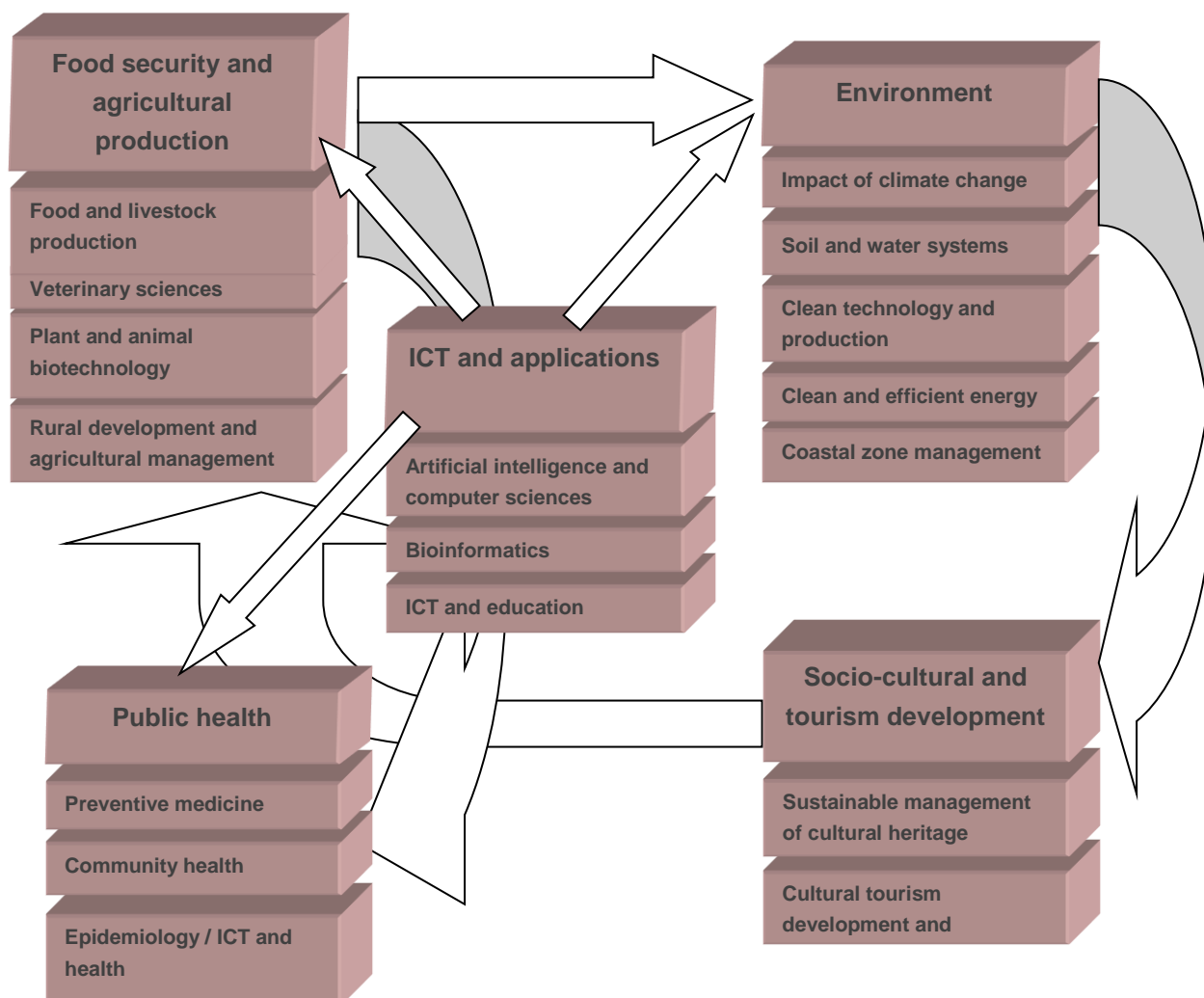
Themes

As HEIs in Cuba are required to focus their activities on the national development priorities the Country Team noted broad similarities in research and development priorities among the individual institutions visited, tempered by their specialist capacities and provincial location. Five themes for international cooperation in research and human resource capacity development were identified and validated during the visits to HEIs:

- Food security and agricultural production
- Environment
- Public Health
- Socio-cultural and tourism development
- ICT and applications

There is considerable scope for multidisciplinary research approaches to these themes: Figure 2 shows potential synergies between the themes and sub-themes identified by the Country Team.

Figure 2: Identified research themes and sub-themes prioritised by Cuban HEIs



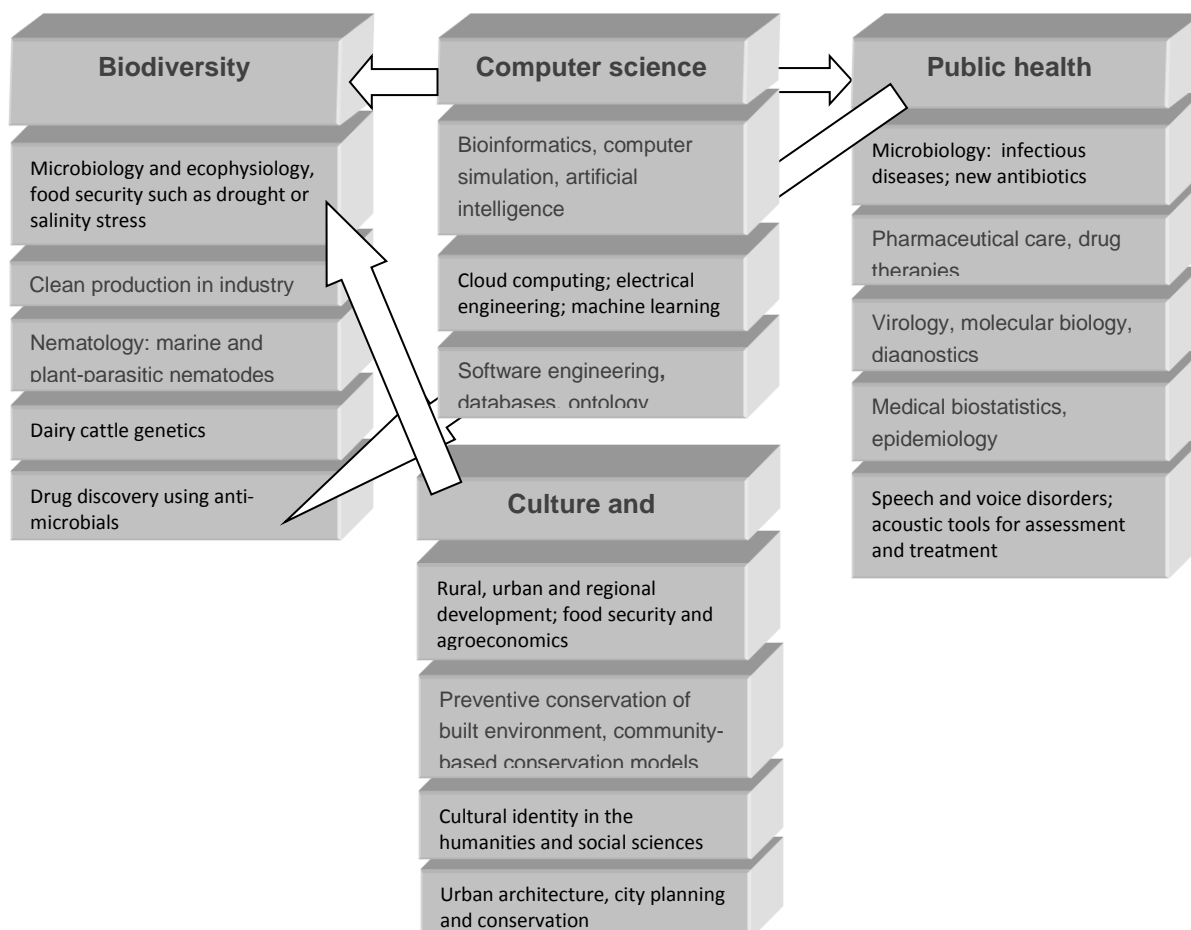
Flemish priorities and interests

Figure 3 (below) summarises the thematic priorities and research interests (and potential synergies between these) of those Flemish academics who expressed interest in working with Cuba and communicated with the Expert Team through interviews or correspondence. These interests were either based upon

- existing or past OI projects with Cuba,
- experience of working in the UCLV IUC programme,
- contacts or collaboration with Cuban institutions outside of a VLIR-UOS context, or
- no specific contacts with Cuba but interest in developing these based on research collaboration experience in other countries.

As can be seen there is a good match between the identified strategic priorities of Cuban HEIs (Figure 2) and the interests of Flemish academics as expressed thus far (Figure 33).

Figure 3: Summary of Flemish academic priority themes and research interests



Transversal needs and opportunities

The Country Team also confirmed among the Cuban HEIs significant interest and need for action in three cross-cutting or transversal themes, in which the priority would be institutional capacity development rather than research, in transversal actions open to any Cuban HEI in the national network. Three themes were first identified through the activities and results of the UCLV IUC programme and validated during the mission:

1. **ICT and applications** (ICT Systems and administration, Statistics and bio-statistics, Learning platforms development)
2. **Language and communications** (English language learning and communication, Writing & presentation for academic purposes)
3. **Information management** (Library & information services management, Access to research information and resources)

ICT and applications

VLIR-UOS and the Flemish universities and university colleges have built up significant experience and capacity to deliver transversal training programmes in ICT systems and administration aimed at institutional management and administrative personnel, both in Cuba, drawing on the experience of UCLV, and in Flanders. Several Cuban HEIs have already benefited from training courses and advice delivered under the UCLV IUC programme.

Statistics and biostatistics capacity is an essential part of basic and advanced research knowledge among postgraduate students, independent of their scientific field. Capacity development in this area would build on existing experience among Flemish universities to provide training and independent learning opportunities for academic staff and teachers by students (building on the CROSS_STAT project) in a transversal action, as well as supporting the establishment of masters level courses within specific HEIs (possibly as part of an IUC partnership or departmental OI).

Most Cuban HEIs are developing administrative and academic services using institutional learning platforms (sometimes called virtual learning environments), mainly using open source applications such as Moodle. The extension and growth of distance education makes this a priority area for capacity development both in the development of customised learning platform applications and services and materials development. Transversal capacity development projects would ideally be aimed at systems developers as well as academic staff using the platforms for course delivery.

Language and communications

The UCLV IUC project 4A - Capacity building for communication in English for academic purposes in international collaboration – established the highly transferable model of CAELTIC. This could form the basis of both transversal actions such as training courses and independent learning opportunities open to all Cuban HEIs (in for example, writing and presentation for academic purposes), as well as institutional actions to develop English language and communication in-house capacity in modified versions of the UCLV CAELTIC (as part of an IUC programme or OI).

Information management

Cuban HEIs face many challenges in the maintenance and development of library services to their undergraduate and postgraduate communities. While VLIR-UOS support could not prioritise support to university library *per se*, Flemish universities have built up considerable expertise and experience in supporting improvement of library and information services through transversal initiatives (such as DOCBIBLAS and STIMIUC). In Cuba such actions should focus on training staff in library and information services management related to information and services for postgraduate and research students and staff, which might include (for example) ICT applications, information retrieval and database searching, information architecture and the development of digital libraries, information resource sharing within the HEI network, and the development and management of institutional repositories.

Access to research information and resources is also a great challenge for Cuban HEIs due to the low connectivity speeds experienced by most institutions, and the high subscription cost of key international journals and information databases, and exacerbated in the case of some publications by the restrictions of the US embargo. Transversal activities in this area could include supporting library and information staff to improve their own knowledge and understanding of the range of

potential sources (both subscription-based and toll-free or open access) in key scientific and technical areas, and in improving their support to academic staff and research students to become more efficient and effective in information search and retrieval using internet and database sources.

2.3.2. Country Strategy Framework (strategic niche resulting from the above)

Table 2: Country Strategy Framework summarises the potential domains in which these themes and sub-themes could be pursued in a programme of VLIR-UOS supported cooperation. It also takes into account where the Flemish interests lie, as articulated in the North seminar on Cuba and subsequent interviews. There is potential for constructive and valuable cooperation at masters and PhD levels, though doctorate level should be considered the more important of these two, given the problems Cuban HEIs currently face in student mobility, the relative lack of professors with doctoral qualifications in many institutions.

There is also considerable potential for VLIR-UOS support to academic staff capacity development and updating – in relation, for example, to basic research methods using ICT such as statistical analysis, in laboratory methods and techniques, and in pedagogical approaches, particularly relating to distance education. This potential area of need could be addressed through either transversal and institutional programme or project interventions, such as training courses, opportunities for staff exchanges and placements in Flemish universities, etc.

Table 2: Country Strategy Framework – strategic niche of cooperation considering Cuban demands and Flemish interest/expertise for cooperation

| THEMES | | | | DOMAINS | | | | | | | | | EFFECT |
|---|---|---------------------|-------------------------------------|-----------|-----|---------------|-----------------------------|------------------|-------------------------|---------------------|------------|--|-------------------|
| | | | | EDUCATION | | | RESEARCH | | EXTENSION | | MANAGEMENT | | |
| MAIN THEMES | SUB-THEMES /AREAS | Regions / Provinces | Possible partners | Master s | PHD | Short courses | Multi-disciplinary research | Resear ch output | Collaborati ve training | Communi ty services | HRD | Internationa l networking and linkages | |
| CONTENT BASED THEMES | | | | | | | | | | | | | |
| Food security & agricultural production | Food and livestock production | National | UNAH, UMCC, UCLV, UC, UDG | * | * | | * | * | * | * | | | THEMATIC CAPACITY |
| | Veterinary sciences | National | UNAH, UMCC, UCLV, UC, UDG | * | * | | | * | * | * | | | |
| | Plant and animal biotechnology | National | UNAH, UH, UMCC, UCLV, UNICA, UC, UO | * | * | | | * | | | | | |
| | Rural development and agricultural management | National | UH, UNAH, UMCC, UCLV, UC, UDG, UO | * | * | | * | | * | * | | | |
| Environment | Impact of climate change | Central and East | UO, UCF | * | * | | * | * | | | | | THEMATIC CAPACITY |
| | Soil and water systems | Havana, Central | UNAH, UC, UDG, UO | * | * | | * | * | * | | | | |

| THEMES | | | | DOMAINS | | | | | | | | | EFFECT |
|--|---|--------------------------|------------------------------|-----------|-----|---------------|-----------------------------|------------------|-------------------------|---------------------|------------|--|-------------------|
| | | | | EDUCATION | | | RESEARCH | | EXTENSION | | MANAGEMENT | | |
| MAIN THEMES | SUB-THEMES /AREAS | Regions / Provinces | Possible partners | Master s | PHD | Short courses | Multi-disciplinary research | Resear ch output | Collaborati ve training | Communi ty services | HRD | Internationa l networking and linkages | |
| | | and East | | | | | | | | | | | |
| | Clean technology and production | Havana, Central and East | ISPJAE, UCF, UO | * | * | | | * | * | * | | | |
| | Clean and efficient energy | Central and East | ISPJAE, UMCC, UCF, UNISS, UO | * | * | | | * | * | * | | | |
| | Coastal zone management | National | UH, UO, UCF | * | * | | * | * | * | | | | |
| Socio-cultural and tourism development | Sustainable management of cultural heritage | Havana, Central and East | UH, UO, UC, UCF, UMCC | * | * | | * | * | * | | | | THEMATIC CAPACITY |
| | Cultural tourism development and management | Havana, Central and East | UH, UO, UC, UCF, UMCC | * | * | | * | | * | | | | |
| Public health | Preventive medicine | Havana, Central and East | IPK, UH, UO | * | * | | * | * | * | | | | THEMATIC CAPACITY |
| | Community health | Central and East | IPK, UCLV | * | * | | * | * | | * | | | |

| THEMES | | | | DOMAINS | | | | | | | | | EFFECT |
|--------------------------------------|---|--------------------------|--|-----------|-----|---------------|-----------------------------|------------------|-------------------------|---------------------|------------|--|--------|
| | | | | EDUCATION | | | RESEARCH | | EXTENSION | | MANAGEMENT | | |
| MAIN THEMES | SUB-THEMES /AREAS | Regions / Provinces | Possible partners | Master s | PHD | Short courses | Multi-disciplinary research | Resear ch output | Collaborati ve training | Communi ty services | HRD | Internationa l networking and linkages | |
| | Epidemiology / ICT and health | Havana, Central and East | IPK, UCLV | * | * | | * | * | | | | | |
| ICT and applications | Artificial intelligence and computer sciences | Havana, Central and East | UH, ISPJAE, UCLV, UCI, UO | * | * | | * | * | | | | | |
| | Bio-informatics | National | UH, ISPJAE, UCLV, UO, UNAH, IPK, UNISS | * | * | | * | * | | | | | |
| | ICT and education | Central and East | UCLV, UO | * | * | | * | * | * | | | | |
| TRANSVERSAL AND CROSS-CUTTING THEMES | | | | | | | | | | | | | |
| ICT and applications | ICT Systems and administration | Central and East | UCLV, ISPJAE, UO, UC, UCF, UDG | | | * | | | | | * | * | |
| | Statistics and bio-statistics | National | UH, UCLV | * | | * | | | * | | * | | |
| | Learning platforms | National | UCLV | | | * | | | * | | * | | |
| | | | | | | | | | | | | SUPPORT, CAPACITY, ENABLING ENVIRONME NT | |

| THEMES | | | | DOMAINS | | | | | | | | | EFFECT |
|-----------------------------|--|---------------------|------------------------|--|-------------|---------------|------------------------------------|-----------------|-------------------------------------|--------------------|--|---------------------------------------|---|
| | | | | EDUCATION | | | RESEARCH | | EXTENSION | | MANAGEMENT | | |
| MAIN THEMES | SUB-THEMES /AREAS | Regions / Provinces | Possible partners | Masters | PHD | Short courses | Multi-disciplinary research | Research output | Collaborative training | Community services | HRD | International networking and linkages | |
| | | | | | development | | | | | | | | |
| Language and communications | English language learning and communication | National | UCLV, UO, UC, UCF, UDG | | | * | | | * | * | * | * | SUPPORT, CAPACITY, ENABLING ENVIRONMENT |
| | Writing & presentation for academic purposes | National | UCLV, UO, UC, UCF, UDG | | | * | | | * | * | * | * | |
| Information management | Library & information services management | Central and East | UCLV, UO, UC, UCF, UDG | | | * | | | * | | * | * | SUPPORT, CAPACITY, ENABLING ENVIRONMENT |
| | Access to research information and resources | Central and East | UCLV, UO, UC, UCF, UDG | | | * | | | * | | * | * | |
| EFFECT | | | | NEW PROGRAMMES, IMPROVED TEACHING QUALITY ETC. | | | RESEARCH CAPACITY, CULTURE, OUTPUT | | EXTENSION CAPACITY, CULTURE, OUTPUT | | VISION, STRUCTURES AND PRACTICES, PROCEDURES | | |

2.3.3. Collaboration within networks

The MES has strongly emphasised the importance of academic networks within Cuba through which the benefits of international cooperation are shared between HEIs and national collaboration in research is encouraged (see page 12). The Country Team also strongly advocate a network strategy for VLIR-UOS support and Flemish cooperation with Cuban HEIs, building in particular on the strengths and achievements of the UCLV IUC programme in developing capacity and skills at UCLV itself, and the Flemish contacts with other institutions that have resulted.

Network university cooperation

MES supports a 'Network University Cooperation Project' through UCLV, and has made particular reference to such a role in ICT, leadership training, English language training and possibly other national network support. MES also wishes to see a strong national network developed around the issues of food security.

Whatever options are chosen or taken up, the principles that underlie the network coordination role must include:

- Avoiding unnecessary duplication of investment on the part of VLIR-UOS, for example, in laboratory equipment where possibilities exist to share facilities;
- Building on the existing expertise of academic and other staff that have benefited from capacity development under the IUC programme, to extend these benefits to other institutions in key skills areas, such as laboratory management and technicians, ICT systems and administration;
- Ensuring that the 'network facilitator' itself receives appropriate support for developing and delivering its services and support to ensure that its own capacity and ability to develop does not suffer.

2.3.4. Partnership modalities (portfolio of intervention types)

Cuban HE offers Flemish partners an extremely wide and diverse range of research cooperation opportunities within the thematic priority areas, and can ensure the availability of high quality and dedicated academic research staff and students in these areas, though research facilities and infrastructure are somewhat lacking. Cuban HE therefore has the potential to benefit from the fullest range of partnership and cooperation modalities.

Table 3: Summary of potential in various partnership modalities

| Level | Remarks |
|---------------------------------|---|
| National/transversal | Because of culture and practice of national HE networking and sharing of capacity development and achievements, transversal programmes have great potential, particularly in the areas defined by the mission. There is a slight risk that the need for and practice of skills transfer could overwhelm the Flemish and Cuban resources and capacity to deliver at the expense of more mutually important research cooperation projects, and this should be monitored closely. |
| Institutional but network based | The potential UCLV support network could offer a 'menu' of services and support to individual HEIs (both those involved directly in VLIR-UOS projects and others in the national network), which could be drawn on and remunerated appropriately through VLIR-UOS and / or MES modalities. |
| Institutional | Given the national priorities on regional development and subject focus, there is general consensus that only one institution among has the potential to develop and cooperate in a full IUC Programme. |
| Sub institutional | Among the MES HEIs there are several with highly effective and expert Faculties and research Centres that have considerable potential to develop joint research proposals with Flemish partners (some building on existing OIs). VLIR-UOS might consider reflecting this potential by balancing the overall country allocation in favour of slightly reducing the anticipated IUC programme allocation and thus providing an expanded allocation for individual joint research project proposals in a regional or country-wide competitive application process. |
| Individual (scholarships) | The MES has expressed interest in a national programme of scholarships in some key fields, to directly address the lack of student mobility among young academics and postgraduate students. These key fields and standards for qualification for awards should be selected very carefully – the national need is great and far outstrips VLIR-UOS resources. |

2.3.5. Non-academic partners and stakeholders

Within the thematic priority area of socio-cultural and tourism development (see Figure 2) there is considerable potential to collaborate with several non-academic partners in research projects that would directly impact on the lives of communities and enterprises: these potential partners and stakeholders include:

- the OHCH and the national network of Oficinas Historiadores in the cities that are World Heritage Sites in Cuba (Old Havana, Trinidad, Camaguey, Cienfuegos, Santiago de Cuba);
- UNESCO Regional Office for Culture in Havana, which has expertise in human resource development programmes and leveraging external funding to support its core programme areas such as the World Heritage network and culture and development.

2.3.6. Contribution and opportunities for Flemish non-university HE institutions

Contributions and opportunities for Flemish non-university HE institutions are certainly present in context of the new country strategy framework. A possible example referred to through the input from South and North stakeholders is to be situated within the thematic priority area of socio-cultural and tourism development (see figure 2).

2.4. SWOT analysis of a VLIR-UOS strategy with Cuba

| Strengths | Weaknesses | Opportunities | Threats |
|---|---|---|---|
| Positive commitment and active cooperation of the MES in strategic planning, facilitating partnerships and problem-solving. | Centralised government systems of policy-making, planning and budgeting (including budget allocation) are bureaucratic and opaque. | Changes announced in the 2010 Communist Party Congress may open up the HE system to greater flexibility in budgeting and revenue-generation through service delivery and product development. | Change is a slow and relatively unpredictable process in Cuba. |
| | Very poor national internet connectivity has and continues to constrain HE and research in many different ways. | | As international research moves more and more to the digital and online modalities the gap between Cuban research capacity and knowledge base and that of other countries is widening |
| Cuban HE and research benefits from many decades of high basic education standards and the HEI intake of students have been well-educated and dedicated to achieving educational and research goals | Widening access to HE has weakened educational quality and put great strain on HE and research infrastructure, facilities and budgets. | A pool of expert and committed academics are currently available and enthusiastic to develop joint research activities. | Standards in basic education have slipped during the past decade and it may be difficult for Cuba to sustain educational quality throughout the system in the coming years. |
| The national HE and research networks coordinated by MES and individual HEIs, and the culture of collaboration; provide a strong framework for research and training cooperation and skills transfer. | The networks exist but actual operations and active sharing of capacity and resources is severely constrained by lack of connectivity, money and transport around the country. Outside of Havana these problems escalate. | VLIR-UOS can make a significant (but focused) contribution using these established networks. | |
| There is a long history of effective research cooperation and scholarly | | The success of the UCLV IU Programme and the extensive contacts and | |

| | | | |
|---|--|---|--|
| exchange between HEIs in Cuba and Flemish institutions. | | links already fostered with Cuban academics in the Eastern region of the country through the UCLV projects provide a good basis for new initiatives and collaborative networking. | |
|---|--|---|--|

ANNEXES

- 1. Country Strategy Grid (already included in text p. 19-21)**
- 2. Country Fact Sheet (see VLIR-UOS website – Cuba Country Info)**
- 3. Country Identification Mission Report**