

# Review of Norwegian Programmes in Higher Education, Research and Development (HERD) in the Western Balkans 2010-2015

Final Report



---

**Project:** Review of Norwegian Programmes in Higher Education,  
Research and Development (HERD) in the Western  
Balkans 2010-2015

**Client:** Ministry of Foreign Affairs

**Period:** April – September 2015

**Task Team:**

Mr. Arne **Disch**, Scanteam, team leader

Ms. Stephanie **Crasto**, Scanteam

Ms. Eva **Komlossyová**, Scanteam

Ms. Jorunn **Tønnesen**, Norges Vel

# Contents

<b>Acronyms and Abbreviations .....</b>	<b>iii</b>
<b>1 Executive Summary .....</b>	<b>1</b>
<b>2 Introduction and Background .....</b>	<b>9</b>
2.1 Background .....	9
2.2 Scope of Work.....	9
2.3 Methodology Employed .....	10
2.4 Structure of Final Report .....	11
<b>3 The HERD Programme.....</b>	<b>12</b>
3.1 HERD as a Collaborative and Complex Programme.....	12
3.2 The Agricultural Sector Programme.....	13
3.3 The Energy Sector Programme .....	13
3.4 The ICT Sector Programme.....	13
3.5 The Maritime Sector Programme.....	14
3.6 The Development Studies Programme .....	14
3.7 Summing Up.....	15
<b>4 Producing Results.....</b>	<b>16</b>
4.1 The Agricultural Sector .....	16
4.1.1 Strengthening Academic Excellence .....	16
4.1.2 Innovation, Business Development and Employment .....	17
4.2 The Energy Sector.....	18
4.2.1 Strengthening Academic Excellence .....	18
4.2.2 Innovation, Business Development and Employment .....	20
4.3 The ICT Sector .....	20
4.3.1 Strengthening Academic Excellence .....	20
4.3.2 Innovation, Business Development and Employment .....	21
4.4 The Maritime Sector .....	21
4.4.1 Strengthening Academic Excellence .....	22
4.4.2 Innovation, Business Development and Employment .....	22
4.5 The Development Studies Programme .....	23
4.5.1 Strengthening Academic Excellence .....	23
4.6 Cross-cutting Issues .....	24
4.7 Roles of Norwegian Partners.....	25
4.8 The Survey: Findings.....	25
4.8.1 The Respondents .....	26
4.8.2 Project Results.....	27
4.8.3 Addressing Cross-cutting Issues .....	30

4.9	Findings, Conclusions and Recommendations .....	32
<b>5</b>	<b>Ownership and Sustainability .....</b>	<b>35</b>
5.1	Local Ownership.....	35
5.2	Relevance of Sector Projects and Programmes .....	37
5.2.1	Agricultural Sector .....	37
5.2.2	Energy Sector .....	39
5.2.3	ICT Sector.....	39
5.2.4	Maritime Sector.....	40
5.2.5	Development Studies Sector .....	40
5.3	Sustainability .....	41
5.4	Findings, Conclusions and Recommendations .....	42
<b>6</b>	<b>Project and Programme Management .....</b>	<b>46</b>
6.1	Efficiency of Project Management and Partnerships.....	46
6.2	Programme Management: Sector Managers and MFA.....	49
6.3	Complementarity to other Funding Sources.....	51
6.4	Findings, Conclusions and Recommendations .....	52
	<b>Annex A: Terms of Reference .....</b>	<b>55</b>
	<b>Annex B: Persons Interviewed.....</b>	<b>59</b>
	<b>Annex C: Documents Consulted .....</b>	<b>64</b>
	<b>Annex D: Programme Structure.....</b>	<b>69</b>
	<b>Annex E: Project Results Sheets.....</b>	<b>72</b>
	<b>Annex F: Conversation Guide.....</b>	<b>113</b>
	<b>Annex G: Survey Questionnaire .....</b>	<b>116</b>
	<b>Annex H: Field Work Programme .....</b>	<b>118</b>
	<b>Annex I: Comments in Web Survey .....</b>	<b>120</b>

## Acronyms and Abbreviations

BANOROB	Bosnian-Norwegian research-based innovation for development of new, environmental-friendly, competitive robot technology for selected target groups
BCSP	Belgrade Centre for Security Policy
BIT	Business Innovation and Technology (Centre), Tuzla
CEP	Centre for Education Policy (Belgrade)
HBV	Buskerud and Vestfold University College ( <i>Høgskolen i Buskerud og Vestfold</i> )
HERD	Higher Education, Research and Development
HiAA	University College of Aalesund ( <i>Høgskolen i Aalesund</i> )
HiST	Sør-Trøndelag University College ( <i>Høgskolen i Sør-Trøndelag</i> )
ICBL	Innovation Centre Banja Luka
ICT	Information and Communications Technology
IPM	Integrated Pest Management
MMCDI	Montenegro Sustainable Maritime Competence Development Initiative
MFA	Ministry of Foreign Affairs
NGO	Non-governmental Organisation
NMBU	Norwegian University of Life Sciences ( <i>Norges Miljø- og Biovitenskapelige Universitet</i> )
NORBAS	Norwegian, Bosnian and Serbian cooperation platform for university and industry in ICT R&D
Norbotech	Norwegian-Bosnian technology transfer based on sustainable systems engineering and embedded systems in the fields of cloud computing and digital signal processing
NTNU	Norwegian University of Science and Technology ( <i>Norges Teknisk-Naturvitenskapelige Universitet</i> )
RCN	The Research Council of Norway ( <i>Norges Forskningsråd</i> )
QIMSEE	Quality Improvements of Master Programmes in Sustainable Energy and Environment
SEAMED	Strengthening Education, Applied Research, and Marine Development in the Western Balkans
SEEWB	Sustainable Energy and Environment in the Western Balkans
ToR	Terms of Reference
UBL	University of Banja Luka
UiO	University of Oslo
WB	Western Balkans

# 1 Executive Summary

Norway's Ministry of Foreign Affairs (MFA) invited tenders for a review of its programme of higher education, research and development (HERD) in the Western Balkans. Scanteam, in collaboration with Norges Vel, was awarded the contract for this task.

## The HERD Programme

The HERD programme is complex, funding 32 projects in 5 sectors across 7 countries. It involves 26 Norwegian and nearly 100 Western Balkans partners with a total financing of about NOK 160 million. While the programme was originally to cover the 2010-2013 period, a number of projects have been given no-cost extensions till the end of 2015 and some to 2016, including to allow some PhD candidates to finish their degrees. Final results on some projects are therefore not yet in place, but project progress has been significant enough to allow the team to draw conclusions regarding the sector programmes.

This Review has looked at 22 of the 32 projects, visited partners in 4 of the 6 states, but has not carried out any in-depth assessment of results at project level, for which the team had neither the competence nor the resources.

## HERD Results

All five sector programmes have contributed to improved *higher education*:

- New study programmes/curricula, especially at MSc level, have been introduced;
- New topics or dimensions have been included in existing BSc and MSc programmes;
- A number of PhD students have spent time in Norway on their thesis work;
- A substantial number of BSc and MSc students have spent from one month to a semester in Norway in connection with their thesis work, some also having internships at Norwegian companies;
- A number of staff exchanges have taken place, both from Norway to the Western Balkans, and vice-versa;
- More modern pedagogical approaches based on problem solving, applied research and team work in line with the Bologna process have been introduced and trained in;
- Regional networks have been established, strengthened, expanded and made operational through joint research projects, seminars and learning events;
- Some equipment, especially for laboratories and distance learning, have been procured and installed, to enhance research and experience exchanges.

*Research* has been strengthened:

- Applied research has been given considerable more attention;
- Field work and working with industry in developing research topics for a graduate degree has increased;
- Original research was given priority in the Development sector programme;
- A large number of joint research projects have led to academic publications;
- Regional networks are beginning to produce original research and leading to more cross-regional academic publications.

*Innovations, Business Development* and *Employment Creation* have been parts of all sector programmes, though to somewhat varying degrees:

- The ICT sector has probably developed the strongest links to and contributions to the private sector through its activities;
- The Agricultural sector has funded a number of applied research projects that have developed concrete and market-relevant products and results;
- The Maritime sector is developing new services and training, focusing on international markets, support to local maritime and cruise industries, and local aqua-culture;
- The Energy sector has concentrated on sustainable energy in its training and research, preparing for the industrial and energy transitions expected over the coming period;
- All new higher education programmes are focusing on improving the relevance not only in terms of contents but also pedagogical approach, stimulating inventiveness and confidence in own skills, in some sectors promoting entrepreneurship.

*Gender equality* has generally been supported, though reporting and monitoring of the gender dimension has been variable. Support to *ethnic minorities* has largely not been addressed since there has not a clear specification of objectives and targets.

*Norwegian partners* are generally commented on in very favourable terms (see Annex I):

- In all sectors, WB partners experienced their Norwegian partners as professional and committed to the programme, and generous with their time and knowledge;
- Communications were good, informal, non-bureaucratic. Response time to inquiries was short, and local partners appreciated the immediacy and equity in interactions, which was seen as facilitating rapid exchange of experience and knowledge;
- Norwegian *institutions* and *project coordinators* were praised regarding the facilitation of visits, access to literature, ability to find solutions. The fact that some coordinators have their background from the Western Balkans was seen as being helpful especially in start-up phases when there were uncertainties and problems to overcome.

The *unexpected positive results* were important:

- Strengthened collaboration between W Balkans institutions meant a reestablishment of broken networks for the older generation of researchers; establishing networks for the younger generation which was often a revelation for them; overall that they now work on joint projects and processes and not just bump into each other at conferences.
- HERD funding, though limited, was often the most important for actual research and thus provided resources for university staff to re-engage in scientific research, publish, present at academic events. The review team was given the impression that many staff felt empowered, validated as researchers, that their institutions were being taken more seriously as knowledge *producers* and not just knowledge *transmitters*. In some universities there was a feeling that they had been marginalised by the academic community for many years and now were taking their rightful place at the table again.
- Norwegian institutions are benefitting from the collaboration in several ways: since WB universities are sending top students to Norway, Norwegian students have had to improve their performance; research results, especially in agriculture, are now being applied in Norway; Norwegian institutions have a richer and better network of partners in the region, and the potential for further collaboration has increased.

### Conclusions:

- The HERD programme strengthened curriculum development, pedagogical changes and capacity building, including through staff exchanges and study visits to Norway.
- Peer-learning has been increased through new or expanded inter-regional ties, though with uneven intensities across sectors.
- Links to the private sector have been strengthened but at different rates, in part due to sector characteristics. The transition to more decentralised and “green” energy faces great uncertainties, while in ICT there is a dynamic that is already creating demands for new skills and knowledge. The Maritime and Agriculture sectors are more supply-providers, developing new services and qualities for which they expect there will be an increasing demand, though this demand-dynamic so far is weak.
- Gender equality has been taken seriously though reporting is not systematic. Support to ethnic minorities has suffered from lack of clarity regarding actual objectives.
- The Norwegian actors have been pro-active and constructive partners throughout the period and across sectors, according to their Western Balkan partners.
- The interpretation of what the main objectives of the HERD programme are, varied across sectors. The Energy sector focused on curriculum development, staff upgrading and student exchanges. The Maritime and ICT sectors have been more concerned with the linkages to the private sector and *Employment*, with Agriculture somewhere in between, with its attention to applied research along with academic strengthening. In the Development studies programme, one project was all about the research, working with researchers who did not need any skills upgrading, while the others were more concerned with the capacity building and networking dimensions.
- At the same time, HERD’s “foot-print” is limited to a few sectors, “spill-over” effects from innovations like pedagogical approaches to other faculties have not been mentioned – the only exception seems to be the multi-functional labs in the Energy sector that are open to all university members.

**Bottom line:** Projects and sectors have produced expected Outputs and delivered important additional positive results such as strengthened regional networks. These have led to more joint undertakings due to the sense of validation along with the resources that projects have provided. A number of projects can point to results also at Outcome and Impact levels.

### Ownership and Sustainability

Local *Ownership* to the HERD programmes was strong across all five sectors:

- There was strong agreement that the individual projects were based on priorities set by the Western Balkan partners;
- There was also clear agreement with the statement that the actual development of the projects had been developed by the WB partners. This was particularly strong in the sectors that built on historical relations – agriculture and energy – whereas in the ICT sector some local actors felt that one of the original project managers did not listen as much to them as they would have liked;



- There was strong agreement that the projects were supported both by management and by colleagues and immediate superiors, which is important since external project funding can easily generate resentment if funding is not seen as important to the institution as such.

The **Relevance** issue needs to be seen at three levels: the HERD programme as such; the five sector programmes; and the individual projects within the programmes. The overall HERD programme is addressed in the final chapter and thus also its relevance.

The five sectors are clearly relevant to the challenges that the WB region is facing. The expertise and experience that Norwegian partners have provided have been seen as highly relevant: local actors expressed appreciation of the skills and knowledge that the Norwegian institutions could impart, both due to the scientific excellence but also the applicability to the issues the WB actors were facing.

The real question has been relevance of the projects – not because of their results, but because selection may have been too much based on scientific excellence rather than relevance to the objectives set for the programme: (i) *educating a national workforce ... [through] sustainable capacity of higher education institutions in Bosnia & Herzegovina and Kosovo*; (ii) *stimulate innovation, product and process development ... through support to applied research and development*; and (iii) *provide insight into development challenges ... in the Western Balkans*.

- The *Energy sector* has had a fairly clear strategic focus, building on earlier work and strengthening the contents of the educational work but also extending and deepening the “horizontal” linkages among the universities in the region, providing tools (i.e. trained staff, PhDs, multifunctional labs) and approaches (i.e., industry-university links, mutual learning through summer schools) that address the issues and point towards an exit strategy based on sustainability of results and relationships;
- The *Agriculture sector* has a more diversified project portfolio in terms of subject matter, degree of geographic coverage, links to agricultural producers and agro-industries on both the input and output sides. It is difficult to fault the programme for a lack of strategic consistency since the different states do not themselves have any joint policy and even internally appear not to have consistent long-term visions. Nonetheless, it could be useful to discuss what the ever tighter integration into the EU means in terms of challenges to the region and thus how Norway can best support the transition in agricultural policies and practices that appear on the horizon.
- The *ICT sector* has divided its attention in two: an educational project covering three states, and an applied component focused on Bosnia. The educational project only included Kosovo of the two countries that were to be addressed, while the more broad-based general component was narrowly focused on Serb-speaking areas.
- The *Maritime sector* has concentrated on the two coastal neighbours of Albania and Montenegro, succeeding in establishing good working relations and mutual learning projects. The question is if the capacity building for off-shore work is addressing a real labour market need with spread-effects to national economies.
- The *Development studies sector* is an assembly of research projects with only a weak common thematic, different degrees of capacity development, and with partnerships with organisations that may have weaker institutional and financial foundations but

most likely provide more relevant research, results and external communications of findings since a number of them are also engaged in various levels of advocacy work. Whether all provide insight into what can be termed *development challenges* is less obvious.

- What is missing is clearer and more operational guidance from the MFA regarding what it expected from the three overarching objectives for HERD. The 5 sectors applied different criteria when putting together their portfolios, without the MFA reacting to this. This particularly stands out when it comes to regional collaboration, where it might have been useful if the MFA had more strongly encouraged projects based on issues of common interest across the region, or that constitute common challenges for their EU accession processes. Without this, it is not clear how Norway's interest in supporting regional reconciliation and collaboration – the overarching objective for Norway's continued support to the region – is being advanced.

The *Sustainability* of the programme varies by programme dimension. The links between Norwegian and WB partners, and among the WB partners, appear solid and likely to sustain themselves as long as they are addressing issues of common interest. The sustainability of project results will vary. Projects that have been able to successfully complete their work will probably be sustainable since host institutions – generally public universities – have an own-interest in maintaining and applying the project outputs, such as new curricula, teaching approaches, but first and foremost increased own skills and knowledge. One reason even incomplete projects may experience sustainable results is that almost all the WB partners feel that their own capacities and competencies have improved, meaning that their capacity to compete for future resources such as EU funds under *Horizon 2020* has improved. But a number of the individuals that have been trained under the programme may have problems finding employment at universities so their acquired skills and knowledge may be lost.

### Conclusions:

- Local *Ownership* is strong, with activities largely defined by local actors, project designs reflecting a strong local role, with strong support from own management.
- The *Relevance* of projects is generally argued in project-specific terms rather than from a sector-strategic vantage point. It is therefore difficult to ascertain their relevance to national aspirations, also since states themselves exhibit limited consistency of vision.
- The selection of the 5 sectors can be justified, but the sector *portfolios* vary in apparent relevance. The MFA itself has not clarified what it would consider success criteria for the HERD objectives. Overall, the *Relevance* concern could have been better addressed through better guidance and feed-back from the MFA as the portfolios evolved.
- The *Sustainability*, typically the weak spot in collaborative programmes, is quite good since ownership to the activities appear strong and local partners have institutional solidity, a reasonable financial base and considerable technical capacities.

**Bottom line:** The HERD programme appears as a major success, due to the dedication and professionalism that both sets of partners have exhibited and the strong *Ownership* to the activities in the region, something that is likely to ensure a high degree of *Sustainability*. The *Relevance* to national and regional development needs is more uncertain due to lack of clear criteria for project selection and heterogeneous sector portfolios.

## Project and Programme Management

The HERD programme is seen as *highly efficient* by both Norwegian and Western Balkan partners. This is both at project and at sector programme levels. There were some implementation hurdles, but most of the specific ones referred to were actually in the WB region – not with the HERD projects. Funding was made available in a timely manner, it was generally easily accessible, and financial and results reporting was focused on essentials and reasonable in terms of effort required. The sectors had a Norwegian institution as manager, where a secretariat and coordinator ensured overall management/administration, and where sector-based boards approved projects and provided oversight regarding sector progress.

At the overarching programme level, the MFA granted a lot of flexibility to the sectors and probably not sufficient guidance. Clearer directions regarding a results focus with standard delivery chains would have been helpful.

The MFA might also have involved the embassies more, as a means of providing some support to projects, but also to provide embassies with a role in providing political visibility to a highly successful programme that has a value beyond the academic world.

There seemed surprisingly little complementarity to other funding sources, though all actors recognise that over time the academic community will need to rely increasingly on EU funding. For the time being, however, there was a sense that HERD provided a much more appropriate approach to the needs of Western Balkans institutions.

### Conclusions:

- The overall management approach has been very good, with decentralisation, flexibility and focus on achieving results leading to efficiency and effectiveness of resource use along the *delivery/ decision/ reporting chain*: MFA ⇔ sector coordinator ⇔ project coordinator ⇔ project implementer, with high satisfaction at all steps.
- The weakest link has been MFA ⇔ sector coordination, where there has been lack of clarity regarding what the MFA really wants (academic excellence? economic development? regional reconciliation? gender equity?...) leading to different practices across sectors (research vs. capacity development; innovation vs. research; university-internal development vs. market-related activities; etc).
- The lack of clarity extends to project selection criteria, where application forms lack simple templates for *results frameworks* (Outputs ⇔ Outcome ⇔ Impact), and, where relevant, *value chains*. A number of projects did not include Outputs and Outcomes that can be assessed against expected societal benefits, which is a major weakness when economic development and labour market relevance are stated as important.
- The current practice of non-bureaucratic project amendments should be continued to ensure adjustments to reality and thus continued high relevance.
- HERD is a university-focused programme and thus may not seem likely to provide a lot of attention outside the academic community. But HERD contains a number of dimensions and “lessons learned” relevant beyond university walls: regional collaboration, links business ⇔ research, new approaches to effective learning, gender equity, etc. There are also a number of benefits to Norway from this programme: some of the research done in the Western Balkans, for example in agriculture, is now being

applied in Norway; Western Balkan students coming to Norway have shown a commitment and interest in learning that has been inspirational to the Norwegian students; a number of joint research papers have strengthened knowledge both places. Norway could publicize such benefits much better, in part through stronger involvement and clearer roles for the embassies.

- The above point shows how relevant the HERD programme in fact is, and thus how Norway can better market what is perhaps its “flagship support” to the region.

### Recommendations

As the current programme is ending, the following Recommendations are thus proposed:

- The HERD programme is a highly successful programme that is providing unique support in line with the Bologna process. It should thus be continued for a further (final?) period, building on results to date and ensuring successful conclusion to Norway’s support to academic development in the region based on regional reconciliation and joint progress.
- The programme period should be sufficient for meaningful project results but also to allow for possible “lag” components to be concluded in an orderly and predictable manner (possible PhD studies etc). A programme horizon of 5-7 years with a “core period” of 4 years where all substantive work is to take place could be considered, and with a tapering off period with diminishing budgets that can include no-cost extensions of planned activities that experienced delays.
- The HERD partners should organise a learning/planning event to look at (i) what has been successful in terms of local capacity building (staff exchanges? student exchanges? regional events? distance learning? focus on contents vs. approach? links to external actors/private sector?); (ii) what should be focus for coming period (regional networks – broader, more inclusive partnerships? thematic focus – EU membership challenges? own academic excellence? regional economic development? modernisation of pedagogical approaches across universities and region? regional reconciliation?...); (iii) how to ensure best possible *programme/ project portfolio* within each sector – bottom-up applications with minimum criteria (partners from at least 3 states? some active outreach to other faculties? etc) and clear strategic guidance from MFA (broad regional engagement? broad university-wide learning where possible? focus on systemic rather than narrow technical issues?); (iv) should consider if a needs assessment for each sector may be helpful, since some projects appear to be based on personal networks rather than strategic considerations.
- The sectors to be included in a new phase should be decided based on “most likely to have an impact” considerations as well as budget considerations: those sectors that are included should have sufficient funding to make the sector programme meaningful and with synergies possible across projects.
- Benefits to Norway should be identified and clarified, including possibilities for exploiting comparative advantages such as cost differentials for applied research, thus perhaps increasing the range of activities that the partners could share.

- The MFA should develop simple templates for project frameworks (planning) and reporting, to ensure monitoring of Outputs, Outcomes and tracking Relevance, Impact and Sustainability considerations.
- Each sector programme should contain an exit strategy so that at the end of the coming programme period the likely sustainability of results can be documented.

## 2 Introduction and Background

Norway's Ministry of Foreign Affairs (MFA) invited tenders for a review of its programme of higher education, research and development (HERD) in the Western Balkans. Scanteam, in collaboration with Norges Vel, was awarded the contract. This report provides the main information, findings, conclusions and recommendations from the task.

### 2.1 Background

The MFA supported a programme in the fields of higher education and research in the Western Balkans over the period 2000-2009. Based on this experience, in 2010 a more comprehensive programme, HERD, was set up for the period 2010-2013, but was prolonged to end 2015 partly due to some late start-ups, terminated activities in Croatia due to its membership in EU and to allow for completion on academic degrees. The programme had the following objectives:

- To contribute to educating a national workforce that has adequate innovative qualifications in the maritime, agricultural, ICT and energy sectors, building in the longer-term perspective, sustainable capacity of higher education institutions in Bosnia and Herzegovina and Kosovo;
- To stimulate innovation, product and process development in the maritime, agricultural, ICT and energy sectors through support to applied research and development in the Western Balkans; and
- To provide insight into development challenges by supporting regional social science research in the Western Balkans.

In line with the objectives above, five sector programmes were set up and five academic institutions were delegated substantive and practical administration of the programmes:

- Maritime sector: University College of Aalesund;
- Agricultural sector: *Norwegian University of Life Sciences* (NMBU);
- ICT sector: *Buskerud and Vestfold University College* (HBV);
- Energy sector: *Norwegian University of Science and Technology* (NTNU);
- Development Studies: *The Research Council of Norway* (RCN).

Each programme was in principle allocated NOK 32 million but since activity levels have varied across the programmes, actual disbursements have been allowed to vary. Since some activities started up late, the programme period has been extended till the end of 2015, though in the case of the Energy sector some activities will continue till the end of 2016, and in the agriculture sector some PhD students will finalise their studies by end 2016 (see Annex A for the full Terms of Reference).

### 2.2 Scope of Work

The review assessed the results of the programmes in relation to objectives defined in the programme documents. Emphasis was to be on concrete results, their contribution to scientific and business innovations, and academic competence. Issues to address include:



- Have the projects addressed relevant needs of the cooperating academic institutions in the Western Balkans?
- Do the projects address relevant development challenges for the participating countries and their participating academic institutions in the maritime, agricultural, energy and ICT sectors?
- Do the projects promote innovation, business and employment?
- Have the Norwegian academic institutions involved in the projects contributed to the quality of the projects?
- Have synergies been obtained through cooperation with other contributors (EU-programmes, other donors, Norwegian embassies, NGOs and INGOs)?
- Have projects contributed to gender equality?
- Have projects contributed to enhance participation of ethnic minorities?

Based on the above findings, the review was to consider the *sustainability* of the projects and of future relationships between the Norwegian and local institutions involved in the programmes. It assessed the dynamics in the relationship between education, innovation and business with a view to possible follow-up of individual projects as well as creation of new ones. The evaluation was also to consider the effectiveness and efficiency of the programmes.

A comparison of the sector programmes was seen as desirable.

## 2.3 Methodology Employed

The task has been carried out applying a mixed-methods approach, in phases.

The first task was to identify the universe of actors, which turned out to be considerably greater than originally thought (see table 3.1). This was done both to identify persons to interviews, but also to distribute a web-based survey to all relevant stakeholders.

The team at the same time received the key documents for the HERD programme from the MFA and the Norwegian programme and project coordinators. The number of documents available was greater than expected since a large number of academic papers as well as administrative reports have been produced. Since the team was neither asked to nor had the qualifications to assess the quality and results for the individual projects, the team focused on the three sets of documents at project level: (i) the project proposals (applications) that provide the original intentions for the projects, (ii) the final results reports that would document achievements, (iii) key documents from implementation such as annual meetings where changes to original objectives might for example have been agreed.

A first document review was carried out of the core documents of the programme itself – the MFA programme document, agreements with the sector coordinating institutions (see Annex C). A first set of interviews with MFA and sector programme coordinators was carried out, before a second round of interviews was done with some Norwegian project coordinators.

Because of the complexity of the programme, it was clear that only a selection of projects could be reviewed. One parameter for project selection was that the projects could be visited in the field. Since the team had been told only to visit Bosnia, Kosovo and Serbia, this eliminated a number of projects. One consequence was that no maritime sector projects

would be included. The field work was therefore restructured to include Montenegro (see Annex D for HERD programme structure and Annex H for the field work programme).

The field work was carried out during the period 22 June-01 July. The team spoke with over 70 local stakeholders representing 25 local partner organisations in a dozen cities in four countries (see Annex B). The conversations were often with groups of academics who had been involved in the project, providing opportunities for discussions and validation of findings. In several places, discussions with junior staff and students took place, providing information regarding how the HERD programme was seen by some of the Master's degree students who had been to Norway, and how they viewed the HERD programme in general.

To document results, the team put together Project Results Sheets for all projects reviewed (see Annex E). These were sent to the Norwegian project coordinators for comments and corrections, and in most cases feed-back was received. A second round of document reviews was then carried out before the report draft was finalised.

## 2.4 Structure of Final Report

This report consists of six chapters and nine annexes, as follows:

1. Executive Summary, providing the summary conclusions and recommendations;
2. This introductory chapter on the background for the review;
3. A description and analysis of the HERD programme;
4. *Local results*: What have been the results in relation to the objectives defined in the programme documents (*effectiveness*)? How have projects contributed to innovation, business development and employment? How have they contributed to gender equality and participation of ethnic minorities? What have been Norwegian partners' contributions?
5. *Local ownership*: Were the projects relevant to the partner institutions? To partner countries? What is likely sustainability of results once HERD funding ends?
6. *Programme management*: How efficient and effective have projects and programmes been? How complementary are the Norwegian projects with other activities that the local universities are undertaking (funding from EU, World Bank etc.)?

The following annexes are attached:

- A. Terms of Reference
- B. Persons Interviewed
- C. Documents Consulted
- D. Programme Structure
- E. Project Results Sheets, for all projects reviewed
- F. Conversation Guide
- G. Survey Questionnaire
- H. Field work programme
- I. Comments provided by the Survey



### 3 The HERD Programme

The HERD programme is made up of five sector programmes that include a total of 32 projects. There are project activities in all seven states in the Western Balkan. 25 Norwegian partner institutions have worked with nearly 100 partners in the Western Balkans (see table 3.1 below).

#### 3.1 HERD as a Collaborative and Complex Programme

Most Norwegian development assistance provides financial resources to local partners who are then responsible for implementation, quality assurance and reporting. Norway largely monitors that these processes and deliverables are in line with the signed contracts.

HERD is different in that it is a collaborative arrangement between Norwegian and local partners. The programme is intended as more equitable in its structure and implementation because most of the projects are joint research and training efforts between tertiary education institutions in Norway and the Western Balkans. These are actors that have fairly similar structures and mandates, and where differences in capacities and knowledge are to a large extent a function of the differences in access to resources for scientific work.

Another defining characteristic is that the management of the programme has been left to the science communities themselves. While the MFA provides the funding for the programme, it handed over the responsibilities for deciding the priorities and contents of the collaboration to the five programme coordinators.

HERD has three objectives, as noted above (see section 2.1). The first two refer to the sector programmes in agriculture, energy, ICT and maritime sectors while the third one addresses the development studies programme.

These objectives have been addressed by each sector inviting proposals from which a final list of projects in each sector has been approved. The final HERD programme is shown in Annex D, with a partnership structure reflected in table 3.1 below.

**Table 3.1: HERD Sector projects and partners in Norway and Western Balkans**

Sector	Number of projects	Number of Norwegian partners	Number of local partners
Agriculture	13	6	37
Energy	5	4	17
ICT	5	8	15
Maritime	3	2	6
Development studies	6	6	23
<b>Total</b>	<b>32</b>	<b>26</b>	<b>98</b>

The total number of local partners is somewhat misleading. In some cases the same local partner is involved in several projects, those over-estimating the number of partners. On the other hand there are administratively different units (departments, faculties) within a university that are engaged in different projects so the listing only at university under-estimates actual number of local actors involved.

## 3.2 The Agricultural Sector Programme

The Agriculture programme is the largest of the five sectors, with a total budget of NOK 45 million allocated across 13 projects. It is administered by the Norwegian University for Life Sciences (NMBU), and most of the Norwegian partners are from NMBU or organisations such as Noragric and Bioforsk. In addition the University Colleges of Sør Trøndelag and Hedmark have partnered on some of the projects.

This programme has been heavily concentrated in Bosnia but with some partners also in Croatia, Kosovo, Macedonia, Montenegro and Serbia (see Annex D).

The aim of the programme was to support the development of study programmes at universities in the Western Balkans that would contribute to the education of staff in the agricultural fields, largely through applied research. The projects were thus to focus on knowledge generation, institutional cooperation and capacity building in sub-areas of the agricultural sector that are relevant to the economic future of the region.

The programme ended up with two calls for proposals. Under the first call, 14 applications were submitted where 4 applications were granted. The second call gave 16 applications where 9 projects were granted.

Some of the projects that started up under the second call have been granted no-cost extensions of their activities till the end of 2015, and there are also some PhD students who will only finish their degrees after the programme period has ended.

## 3.3 The Energy Sector Programme

The energy sector programme allocated the NOK 32 million across 6 projects, where one was a small-scale pilot. The programme has been administered by Norway's University of Science and Technology (NTNU), which has also been the main project partner, though the University Colleges of Sør-Trøndelag and Gjøvik have contributed and Gjøvik has managed one project.

The programme had a difficult history in terms of getting projects approved. After the first call for proposals, 3 applications were received but only 1 was approved. During the next two calls a total of 7 were received and 2 approved, and during the 4<sup>th</sup> and 5<sup>th</sup> calls, 9 applications were submitted where none were approved in round 4 but 3 were accepted in the last round. The reasons for the high rejection rates were that proposals were outside the scope of the terms of reference, or focused only on research, whereas the main objective was the capacity building of local universities through new Master's programmes in the energy fields. Also the quality of the applications improved considerably over time based on the feed-back provided by the programme administrator to applicants.

The programme has a concentration in Bosnia, with eight out of 17 partners in Bosnia, while one project had partners in all six Western Balkans states eligible for support.

## 3.4 The ICT Sector Programme

The ICT programme was managed by the University College of Buskerud and Vestfold (HBV). It ended up with five projects, where 3 of these were exclusively with Bosnian

partners. A fourth project included both a Bosnian and a Serb partner, while the Academic Exchange for Progress (AEP) covered Albania, Kosovo and Macedonia. The programme can thus be seen to be *geographically* and *conceptually* divided in two parts.

The AEP has been primarily a training programme based on student exchange, but largely at the Bachelor's level, where nearly 50 students from the four Western Balkans universities have spent one semester at Gjøvik University College, which included internships in industry. Programmes are now being developed at the participating universities, and ICT business federations in Albania, Macedonia and Kosovo are partners in the project.

The other projects focused on applied ICT work, strengthening links between the research community and business. There has been a strong concentration on Republika Srpska with some links to other parts of Bosnia but outside of this only to Serbia.

For a number of reasons the ICT programme started up about a year after most of the others, though was able to approve the full programme after only one call for proposals. Still the programme required some time to get going, so several of the projects have been granted extensions till the end of 2015 for finalising their work, while one project that finished in 2014 was given an additional grant for running a post project in 2015.

### 3.5 The Maritime Sector Programme

The Maritime programme has been administered by Aalesund University College. The first call for proposals was in early 2010, five proposals were received but all were rejected due to various shortcomings. In the second call they changed the application form and specified the importance of certain objectives and received seven proposals. Of those they accepted four, which were in the start-up phase when Croatia was granted EU membership. The original maritime projects in Croatia could no longer be funded beyond 2011, because Croatia was no longer eligible for development grants. Of the four proposals accepted, only one had non-Croatian partners, SEAMED (Strengthening Education, Applied Research and Marine Development in West Balkans), which went ahead but without Croatia as a participant country.

Eventually two new projects were approved: the Montenegro sustainable maritime competence development initiative and the Albanian maritime international competitiveness initiative partnerships. Due to the long delays, the three projects ended up with total budgets of around NOK 27 million with NOK 5 million transferred to Agriculture.

The SEAMED projects are seen as a success with good cooperation and results in all four participating countries, with a focus on aquaculture and shellfish. The Initiative projects in Albania and Montenegro have similar objectives and both can point to good results, with some differences. Montenegro is seen as very successful due to a large political interest in the projects, as well as local private businesses and maritime institutions getting involved. With the support from the Norwegian maritime milieu, the Maritime Faculty of Kotor has developed into an attractive institution not only for students from Montenegro, but also from Albania, Azerbaijan and Croatia. The Albanian projects show slower progress, in part due to heavy bureaucracy, but also due to the lack of experience with maritime activities in Albania for several decades. The success from Montenegro, however, seems to be having a spill-over effect and the two projects are cooperating.

### 3.6 The Development Studies Programme

The Development studies programme was administered by the Research Council of Norway (RCN) and placed under its Norway-Global partner programme (NORGLOBAL). Named Western Balkan Countries Development Studies (WBC), the aim of the programme was to provide insight into development challenges in the region by supporting regional social science research. Projects that addressed national and regional challenges related to sustainable economic development and institutional and democratic reforms important for furthering the Euro-Atlantic integration process were given priority. An emphasis was put on the equality between the Norwegian and Western Balkan institutions and active participation of all the partners in the project. The WBC programme built on the experience from the previous research programmes the RCN administered. Overall expenditures including the administration costs amounts to a little over NOK 23 million.

One call for projects was issued in 2010, and 6 projects were selected for funding out of 14 proposals, with project partners from Albania, BiH, Croatia, Kosovo, Macedonia, Montenegro and Serbia<sup>1</sup>, representing not just universities but primarily local think tanks, research institutes and NGOs.

The programme concluded with a conference organized in April 2014 in Zagreb where all projects presented their research findings and lessons learned and discussed possibilities for further collaboration.

### 3.7 Summing Up

The HERD programme is complex, funding 32 projects in 5 sectors across 7 countries. It involves 26 Norwegian and nearly 100 Western Balkans partners with a total financing of about NOK 160 million. While the programme was originally to cover the 2010-2013 period, a number of projects have been given no-cost extensions till the end of 2015 and some to 2016, including to allow some PhD candidates to finish their degrees. Final results on some projects are therefore not yet in place, but project progress has been significant enough to allow the team to draw conclusions regarding the sector programmes.

This Review has looked at 22 of the 32 projects, visited partners in 4 of the 6 states, but has not carried out any in-depth assessment of results at project level, for which the team had neither the competence nor the resources.

---

<sup>1</sup> Some of the individual researchers participating in the projects were affiliated with institutions in the US and Switzerland.

## 4 Producing Results

The five programmes were to produce results across the region within a fairly short time span. The framework conditions and how the programmes chose to address the issues varied. Because of time and resource constraints, the team visited 22 of the 32 HERD projects, interviewing a total of 44 local partners. The results presented below are thus based primarily on the projects visited and on the information provided by the local partners spoken with (see the Project Results Sheets for the 22 projects visited in Annex E).

### 4.1 The Agricultural Sector

The agricultural sector is important, especially in terms of employment. In the two largest economies, Bosnia and Serbia, agriculture accounts for 8.5% and 7.9% of GDP, respectively, but employs 20% and 24% of the population. But the average income per family or per productive unit is relatively low compared to other parts of Europe.

Focus of the programme was on strengthening applied education and research that were relevant to market needs. Of the 13 projects, the team visited seven in the field (see Annex D).

Many of the projects are based on previous collaborations as NMBU has been working with some of these agricultural research institutions for a number of years. Several projects were hence follow-on or new phases of earlier joint studies. This meant that researchers knew each other, there were relations of trust and mutual interest in the topics chosen, the involvement of the local partners in defining the particular research topics tended to be strong, and work could begin as soon as funding had been approved. There is therefore a lot of continuity on both the researcher and issues sides, which has facilitated applications and implementation.

#### 4.1.1 Strengthening Academic Excellence

The objective of strengthening agricultural education was addressed by (i) contributing to new curricula and new courses in relevant topics, (ii) the training of Master's and PhD candidates, and (iii) staff and student exchanges. Some projects have addressed specific issues in terms of geography and agricultural products, while others have been more general in nature.

Through the project *Evaluation of fruit genetic resources in BiH*, a group of nearly 30 BSc, MSc and PhD students have received support for their research-based work that has produced new knowledge that is expected to lead to improved agricultural products and processing of various fruits. Similar approaches and results have been achieved in the fields of *Manufacture of traditional BiH cheeses with selected indigenous bacterial cultures* and *Microbiological flora of milk and dairy products in Kosovo*.

At the other end of the spectrum is the project on *Agriculture adaptation to climate change*, where PhD and Master's students from four universities were supported in their work on climate change-issues while also introducing courses on this topic at the University of Sarajevo. About 23 articles and scientific papers on the topic were produced. The project then also helped develop guidelines for the extension services that introduce new and more climate friendly ways to for example cultivate and fertilise the soil.

Two other projects have some of these same cross-border aspects. *Grassland management for high forage yield and quality* has looked into how to improve yields on lands that have been or are about to be abandoned but which through minor interventions can provide important grazing improvements. *Mineral improved food and feed crops for human and animal health* is related – some of the same scientists are working on both of these projects. On these projects, researchers from 3-6 universities in 3-4 countries in the region are working together to address issues of how to better exploit the natural resource base that is considered poorly exploited today, through hands-on field-based experiments/research, with a number of students involved, including with exchange visits to Norway.

The last set of projects reflects another aspect: that teams of researchers from different universities in different states across the region are collaborating on common issues to the region. The projects and cooperation have stimulated, facilitated and sometimes re-established academic networks across borders. Furthermore, universities with stronger programmes such as those in Belgrade and Novi Sad have provided support and academic resources to some of the other institutions that are still building their programmes.

The collaboration with the Norwegian partners has introduced new approaches to teaching, where different roles for teachers and students are explored, more work in teams and practical field-based research is funded and encouraged. Connecting research to the needs in society and businesses have been important and integrated elements in many projects. Concrete investments and improvement of laboratories have helped the universities and students to conduct analysis of minerals in crop, bacteria and pollution in milk, detect genetic varieties in fruit and identification of unique indigenous bacteria for cheese production, which again have contributed to produce products and findings relevant for the industry. Models for genetic analysis have been developed and have been applied also for fruit varieties in Norway, thus generating direct benefits also to the Norwegian partners.

Student exchanges at MSc and PhD levels have stimulated the academic environment both in Norway and in Western Balkan countries. The cooperation among professors across Western Balkan and Norwegian universities has led to a large number of joint publications in international journals, at conferences and scientific symposia.

#### **4.1.2 Innovation, Business Development and Employment**

Under the project *Manufacture of traditional BiH cheeses with selected indigenous bacterial cultures*, the University of Sarajevo identified and isolated bacteria that have been tested and combined with others to make the most optimal bacterial culture for the traditional *Travnik* cheese. This process included new elements of a technical character, has strengthened the analytical capacity, introduced new ways of discussing results and opened a new field of science: microbiological analysis. Under the project *Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing*, the University of Mostar developed a distinct honey that has achieved a “Product of origin” (“*appellation*”) certification. This process involved local bee-owners/honey producers at the same time as the product has been developed, carefully following local and international regulations. Getting a product protected under an international scheme can stimulate and strengthen the opportunities for increased production for market and for sustainable production. The scientific work together with administrative processes is applicable for other products which again can stimulate the cooperation between research, business and employment.



Using ICT for monitoring pest and insects on wine grapes has contributed to improving *Integrated pest management* (while the IPM project was funded over the ICT programme, its application has been in the agricultural field). Through camera and ICT, insect attacks, fungus etc are monitored and analysed so that pesticides are used when having best effect according to weather, climate, and the stage of the insect attacks. This is environmentally friendly, contributes to the quality of the grapes, and reduces losses.

Establishing a database for indigenous fruit varieties in BiH is both innovative and a source for further development of varieties that can adapt to climate change. Classification and storing of genetic material is important to protect bio-diversity – a concern raised by several agricultural faculties, since the region has a very rich bio-diversity, but one that some feel is now lost at an increasing rate, unless something systematic is done to address this.

Innovative elements in the partnership and cooperation projects are also related to immaterial relations like working in a network with new ways of communicating, sharing of findings, involving business partner in new ways and at an early stage, be exposed to experience from Norway where e.g. TINE (a cooperative) is able to cooperate both with industry and the universities.

While several projects have stimulated and contributed to innovation with regards to products and processes, it is difficult to see that these have had any significant effects on the employment situation. Students who have combined theory and practical work during their studies may be more interesting for the agri-business sector, but this will only be seen over the medium term.

## 4.2 The Energy Sector

As in the agricultural sector, there has been a history of collaboration between NTNU in Norway and a number of the engineering faculties across the Western Balkans. The energy sector had a very clear focus on building capacities of academic institutions and less on the direct links to the private sector. This is in part due to the slower transformation of the energy sector and some of the dilemmas that the region faces. Yugoslavia had developed an integrated power sector around a few large power plants, in part servicing the heavy arms and machinery industry. With the dissolution of Yugoslavia and the collapse of much of the heavy industry, the power sector became fragmented along state lines including the structure of production, transmission and distribution. The energy transition in the Western Balkans therefore is facing a series of challenges as it is expected that much of the demand for energy will now be coming from small and medium enterprises (SMEs), with increased focus on green energy sources, energy efficiency and conservation, and decentralised systems. The engineering studies need to prepare for these expected future shifts, and this lies behind much of the work that HERD has supported.

### 4.2.1 Strengthening Academic Excellence

Two of the three projects looked at – *Sustainable Energy and Environment in the Western Balkans* (SEEWB) and *Quality Improvements of Master Programmes in Sustainable Energy and Environment* (QIMSEE) – are directly linked: QIMSEE builds on SEEWB. Both focus on introducing “green energy” dimensions in the region by (i) introducing new knowledge components in the engineering studies – new or modified curricula; (ii) providing

upgrading of teachers' skills through exchange visits; (iii) exposing faculties to new modes of teaching, (iv) providing study opportunities at NTNU for students preparing their Master's theses; and (v) strengthening peer learning by supporting networks among the various engineering faculties at universities in the region.

The third project looked at was *Rethinking Architecture and Energy Efficiency in Buildings and Urban Development*, where attention is on the new roles architects and architecture need to play for a more sustainable future. But while QIMSEE has activities in eight universities in four states, the architecture project – which is a newly developed one – focuses on two universities in Bosnia.

The SEEWB project, which ended in 2014, contributed to five new internationally recognised MSc programmes in sustainable energy and environment being established at five universities in three states. QIMSEE has developed this further by having three more universities join the programme, and strengthening the regional network, where the University of Zagreb is playing a leading role despite no longer being eligible for Norwegian funding.

During the last three years of SEEWB – the period funded by HERD – over 200 MSc students were enrolled in these new programmes, of which almost one-third were female. About 170 had graduated by the time SEEWB ended, which was way above the initial ambition of 50-75 MSc students. 21 MSc students spent one semester at NTNU working on their theses.

One of the areas that has elicited the greatest interest is how engineering studies are organised at NTNU, which contains in particular two dimensions that WB universities are interested in adapting. The first is the close link to industry, so that theses and teaching are problem-solution oriented and less academically driven: the most effective learning is in applying new knowledge to real problems. The other dimension is working in teams where students learn to share and work together and the teacher is more a tutor-resource than a lecturer – information transmission is a lot more demand-driven. A workshop on team work was held at NTNU in January 2015 for faculty and students from the Western Balkans and was continuously referred to throughout the field work as a real eye-opener.

At the same time, QIMSEE is moving more and more towards *regional* learning and experience sharing. In June 2015 the first of two planned “summer schools” was held in Ohrid in Macedonia with students and some faculty from all eight universities, including some students from NTNU. The focus was exactly on how to use team work to address engineering problems.

The possibilities for regional interaction and learning are being further strengthened through the establishment of multi-media learning centres at the participating universities. This will allow for formal distance learning – using professors from the different universities in the region, from NTNU and elsewhere – but also host student workshops that will allow for joint projects across the region, something that is also generating excitement.

A similar approach to how students learn is being used at Sarajevo's School of Architecture. Instead of doing a series of stand-alone modules students are now given the option of a more long-term “studio” where they have to work on a real issue, such as the development of a neighbourhood of Sarajevo. Students and teachers found this very stimulating and something they would like to generalise.



#### 4.2.2 *Innovation, Business Development and Employment*

Three innovative dimensions stand out: (i) the introduction of energy and environment as integral parts of engineering and architecture training, (ii) the facilitation of more intensive regional networking at both faculty and student levels, with focus on peer learning and experience exchanges, and (iii) the introduction of a problem-oriented team-work based learning culture and approach.

The business development dimension is quite weak, primarily because the Western Balkans as a region is still trying to develop its new energy structure and models after the disintegration of Yugoslavia: the huge investments in the large power sector plants and grids are decaying and there does not seem to be clarity on whether to maintain and upgrade (parts of) this past investment, or move to a new energy production and distribution model – in part because there is still not a dynamic industrial sector that is able to define what kinds of energy sources it prefers and is willing to pay for.

The employment consequences of the new training is still hard to gauge, though it clearly is future-oriented and has sustainability dimensions embedded in the understandings from the training. Whether a number of the newly educated graduates therefore will move to markets where there is more demand for such skills – central EU economies – remains to be seen. Such a brain-drain would be unfortunate, but it is reasonable to expect that once the demand for these skills picks up in the region, these newly trained engineers will be competing for the jobs – there is a lot of loyalty to the region and a commitment to its development.

### 4.3 The ICT Sector

The Norwegian ICT partners were largely new to the Balkans. The MFA provided the services of an MFA staffer with experience from private sector development in the region, which the Board recognises was extremely helpful. The Board asked that a survey be carried out regarding regional ICT needs, which among other things identified modern BSc education as a priority.

Because of the need to get basics in place, the ICT sector was about one year behind the others in implementing its programme. Because this form of collaboration was new to the coordinator, the Buskerud and Vestfold University College (BVU), BVU hired a consulting firm that had been involved in promoting private sector development in the region to handle much of the first-phase management tasks. This arrangement was terminated after a couple of years.

The team visited four of the five projects in the field (see Annexes D and H). Of the four sector programmes (the fifth programme focusing on Development/Research was of a slightly different nature), this one was the most heterogeneous in terms of structure. The four projects visited had four different Norwegian institutional project coordinators: BVU itself, NTNU, NMBU and Narvik University College. Three of them only had activities within Bosnia, and the fourth one only worked with Serb-speaking universities in Bosnia and Serbia.

#### 4.3.1 *Strengthening Academic Excellence*

While the ICT projects were more focused on practical applications and close links with industry, there were notable academic improvements. NORBAS (*Norwegian, Bosnian and Serbian cooperation platform for university and industry in ICT R&D*), has funded four PhD

studies with joint degrees from the two universities involved and NTNU. Curricula and teaching material have been upgraded as a result, and a series of academic papers produced.

*BANOROB (Bosnian-Norwegian research-based innovation for development of new, environmental-friendly, competitive robot technology for selected target groups)* is based on a EU project and has focused on the industry links, but has funded upgrading of laboratories and contributed to upgrading 4 BSc courses and 5 MSc courses that have already graduated about 120 students, of which 25% were female. Furthermore 11 MSc candidates had internships in Norway in connection with their theses, and 16 academic papers are listed as project results.

*Norbotech (Norwegian-Bosnian technology transfer based on sustainable systems engineering and embedded systems in the fields of cloud computing and digital signal processing)* is similar to BANOROB in that it has contributed to developing courses at BSc, MSc and PhD levels while at the same time aligning the contents of these courses with what industry needs.

#### **4.3.2 Innovation, Business Development and Employment**

As in the energy sector, the introduction of the link to industry to help drive the contents and teaching approach is seen as a major contribution of the HERD programme. The real innovation, however, was the use of the “connectors”: the Innovation Centre Banja Luka (ICBL) and its “sister institution”, the Business Innovation and Technology Center (BIT Center) in Tuzla. ICBL has been involved in all three ICT projects while BIT was only engaged in Norbotech. Both have received Norwegian funding previous to HERD as well.

The big difference to the energy sector is that the ICT sector is not only demand driven by industry. Much of the ICT sector consists of start-up companies that develop and provide ICT services and deliverables directly. Both ICBL and BIT therefore have an incubator function as well as the “connector” role. The BIT Center in Tuzla has been highly successful in this area and is about to open its fourth building for hosting ICT start-ups and services. ICBL has not been as successful as incubator, but is an important facilitator between the University of Banja Luka (UBL), UBL’s own innovation centre, and industry.

The Faculty of Mechanical Engineering was involved in BANOROB and Norbotech, while the Faculty of Electrical Engineering hosted NORBAS. This has led to closer linkages between these two faculties, which are located at two different campuses of UBL.

The spread-effects as far as business development and employment are concerned are limited since the projects involve few universities. The concentration of activities in Republika Srpska also seems somewhat odd, both from an industrial development and Norwegian policy agenda perspective<sup>2</sup>.

### **4.4 The Maritime Sector**

The maritime sector is struggling after years of war and neglect, but is becoming a priority sector for Montenegro and Albania. The objectives in the sector, in addition to contributing to knowledge generation, are to strengthen applied research as well as increase the

---

<sup>2</sup> During one of the meetings, a senior official from UBL wanted to convey his gratitude for the support to “the development of Republika Srpska”, whereas Norway has surely intended to support *Bosnia’s* development.

sustainability of the research and seafood industry. The linking with the business sector through the HERD programme has been a first in the region, and is recognised as strategic for the sector's development. The ambition is that with help the sector can flourish and help develop the institutional capacities as well as ensuring that the younger generations who get educated in the maritime sector are competitive in international markets.

#### **4.4.1 Strengthening Academic Excellence**

The SEAMED (*Strengthening Education, Applied Research, and Marine Development in the Western Balkans*) project covered four countries in the Western Balkans. It has improved the curriculum and taught staff new methods of teaching and new research methodologies. The feedback in doing more applied research and fieldwork has been seen as positive and useful for both students and staff.

The *Montenegro Sustainable Maritime Competence Development Initiative* upgraded teaching materials and installed simulators to train students and make them more competitive in the international market. If the students pass they get a certification granted by Aalesund University College in addition to their educational degree. They have trained staff in port and maritime law and administration as well as cruise boat management, thus also being a resource for government when maritime policies and regulations are developed. A similar project in Albania – the two often referred to as “*the Initiatives projects*” – has also focused on improving the competitiveness of the sector's graduates.

Both the SEAMED and the Initiative projects have helped established connections with partners in neighbouring countries. This has encouraged cooperation, also beyond the projects in which they were established. The institutes have at least monthly contact, they provide assistance or advice to the other when needed, and this has been an important aspect for the success of the projects but also for future research projects.

All projects seem to have achieved good results at both MSc and PhD levels. The SEAMED project was to have trained 2-3 PhD students, but ended up with 5 MSc students in addition to 2 PhD students. Institutes have seen improvements in equipment and curricula, and staff have published articles both with and without Norwegian partners.

#### **4.4.2 Innovation, Business Development and Employment**

The link between applied research and business had not been actively pursued before the HERD programme. The project has helped local industries involved in the project on how to better manage fish and shellfish waste, how to improve the canning processes and smoking techniques that had been in use, among other things.

Due to this experience, there is a growing interest from industry to use universities to help achieve better results for their companies, but also to communicate what kind of research/education may be of interest to them so that they can recruit someone with expertise after graduation.

Furthermore, the institutes involved have improved their academic reputations, which is improving their possibilities for accessing new donor funding. A concrete benefit for the University of Montenegro is that with the better reputation, equipment and teaching, they have managed to attract students from the region to apply for both a degree as well as the training certification.

## 4.5 The Development Studies Programme

The specific aim of the Development Studies component was *“to provide insight into development challenges by supporting regional social science research in the Western Balkans”*. The six projects selected covered a wide range of topics though all were within the priorities for the sector programme:

- European integration in higher education and research in WB,
- Innovation policy learning from Norway in WB,
- Legal culture and anti-corruption reform in WB,
- Security transitions in WB,
- Strategies of symbolic nation-building in WB,
- Role of natural resources in sustainable rural livelihoods in WB.

The projects mainly focused on producing new knowledge and publishing scientific papers in their defined areas. Apart from the research focus, all projects emphasized to a varying extent the capacity building component and activities aimed at disseminating the research findings to relevant stakeholders outside the academic world – policy makers, representatives of police etc. – thus trying to contribute to improved policies in their areas.

The Development Studies component was distinct from the four other HERD programmes in its collaborations with non-university institutions. In total, the projects cooperated with 23 institutions in the WB, out of which only six were university-based institutions. The projects instead worked primarily with local think tanks, independent research institutes and NGOs. According to the Norwegian project coordinators, it was easier to find WB partners with expertise in these fields and with a willingness to cooperate on such research and capacity building projects at these institutes rather than at universities.

### 4.5.1 Strengthening Academic Excellence

Building the research capacities of partner institutions in Western Balkans was supposed to be one of the aims of the programme. Different projects gave this objective different priority and approached it in different ways.

The applied models ranged from educating PhD students from the region (European integration in higher education), through organizing fellowships in Norway and series of research workshops focusing on different aspects of the research work in the partner countries (Security transition), to providing training in data collection methods (Role of natural resources). The projects enhanced the capacities of Western Balkans researchers also through the process of developing rigorous methodologies for the research together with Norwegian partners, joint discussions of the research findings and preparation of joint publications, and reviews and advice provided by the partners from Norway throughout the implementation period and in many cases even beyond that. The exchange of knowledge among the partners themselves played an important role as well. Some of the institutions were more experienced than others and assumed the role of regional leader in their fields. Many of the individual researchers involved in the projects did not have previous experience with rigorous research projects and they valued this experience very highly. However, some projects (Legal culture) focused on the capacity building component to a lesser extent, working with rather skilled researchers, thus not seeing the need for further enhancement of these researchers' capacities.

The process of publishing scientific papers went in most of the cases slower than expected. In some cases this was caused by underestimating the time needed for learning how to publish in academic journals. Other delays were caused by complications occurring during the data collection phase, or by people having less time after the project finished to continue working on papers. Given the time needed for publishing articles in highly ranked academic journals, longer timeframe of the programme would have been more appropriate. The three-year timeline was also not sufficient for the completion of PhD degrees.

Another important element of the programme was the process of strengthening or establishing research networks of WB institutions. In some cases, the collaboration among the institutions had already been established during previous projects funded by the MFA. Some partnerships were new, however, and in other cases new partners were added to existing networks. The programme helped them to connect more, to see the others' expertise and to further build on this experience. Still, some respondents mentioned that they expected the collaboration during the project to be more intensive, with more frequent visits and consultations with their Norwegian partners, which would make the networks even stronger and more viable. Due to budget constraints, however, this was not possible.

Thanks to HERD, a number of the local institutions believe their academic reputation has improved, which enables them to access other research funding they were not eligible for previously. Some of the partners are now being approached by other donors and institutions offering them research collaboration. Apart from making themselves more visible in the world of academia, the outputs of the research provided them with useful resources for other activities they are involved in, such as advocacy work or drafting of policy briefs.

## 4.6 Cross-cutting Issues

The gender dimension has generally been addressed in most projects, though the nature of the issue has been somewhat different across sectors and academic levels. At the student level, the intake of female students and in particular the share of female students getting scholarships to Norway appears to have been addressed. Engineering studies are still male-dominated though the share of female candidates has evidently gone up, but a lack of gender-disaggregated data make it difficult to see the overall picture, also over time.

There are still fewer full professors who are female, and some senior female staff note that there is some way to go – the university culture often remains male-dominated. But Yugoslavia had a progressive gender policy that the new states build on, and both male and female staff see further improvements independent of the HERD programme. A key challenge is structural: there are only so many senior staff positions that open up in a year, so progress to higher positions for women is often going to be slow in any case.

Regarding ethnic minorities, the concept was never really clarified and no projects appear to have addressed this explicitly. One reason is that the key marginal group Norway has wanted to support, the Roma, seldom reach university level, so the problem cannot be addressed at this level. Another issue is who is defined as a minority where. In Bosnia, the label can be applied to all the three dominant ethnic groups, depending on where one is. In Vojvodina (University of Novi Sad), where there are at least 10 distinct ethnic groups, it is unclear what the meaning of the concept would be, and how it could be applied in a useful manner. It was therefore not clear what it is Norway expects as results along this dimension.



## 4.7 Roles of Norwegian Partners

All the Western Balkan actors were highly appreciative of their Norwegian partners. They were seen to be positive, supportive and helping out with their knowledge and skills. Sharing experiences regarding research, setting up field tests, collecting and analyzing data, preparing academic publications, presenting at international conferences have been useful to the individual researcher and their institutions in terms of international recognition.

Response time to requests were said to be low, there has been attention to what can be useful in the local contexts, and the support for and facilitation of regional networks was much appreciated. One comment heard on several occasions was how HERD enabled older faculty to re-connect with colleagues at other universities with whom they had not really been in touch for many years and with whom they could now work together again. For younger academics it was often the first time they did research with colleagues of the same generation across the region – and this was very much appreciated, for so many reasons.

Closer links to the private sector, academic training based on actual problems solving, working in teams and having professors act as resource persons rather than just as lecturers introduced new approaches to learning. Fulfilling the PhD requirement through publishing a series of articles rather than producing a major thesis, while largely the norm under the Bologna standard, was a new experience for most of the universities in the region.

Study visits to and internships in Norway for teaching staff and graduate students at MSc and PhD levels was seen as very useful, and Norwegian universities were complemented on their support for such visits. On the Norwegian side, it was noted that since the Western Balkans universities were sending very capable candidates, the Norwegian students had to shape up as well, so there were clear benefits also to the Norwegian universities from these exchanges! The added benefit of having the Norwegian reputation attached to both publications and certifications has given the institutes a new sense of pride. It has also helped the institutes involved build a solid reputation in the region for future collaborations, and better placed to compete for EU research funds. The legitimacy conferred on a given research project by having a Norwegian partner also opened some doors that local researchers alone might not have been able to access. This was particularly mentioned in the Development research sector, where some of the topics could be seen as somewhat sensitive.

While the projects were primarily to strengthen human resources, a number of the projects purchased equipment which turned out to be important to project achievements: without relevant IT equipment, laboratory facilities etc it would not have been possible to carry out meaningful research. Given the funding constraints faced by all universities in the region, this was a very welcome support.

## 4.8 The Survey: Findings

As part of this evaluation, a web-based survey was distributed to all the core stakeholders in the programme. The final list of respondents contained 160 names and e-mail addresses. For some stakeholders, the team was not able to find current e-mail addresses, so some known participants were in fact not reached.

The survey was kept short and simple, asking respondents to rate the HERD programme along three core dimensions: results achieved, local ownership, and management. The reason for the brevity was to encourage as many as possible to spend the few minutes it would take to think through how well they considered that their project had performed and was organised. The focus was on the questions provided by the MFA in the ToR, so that the team would have a broad-based evidentiary foundation for key findings.

In addition to the ratings, respondents were encouraged to provide written comments on the three general areas of the survey, with nearly 70 comments received (see Annex I).

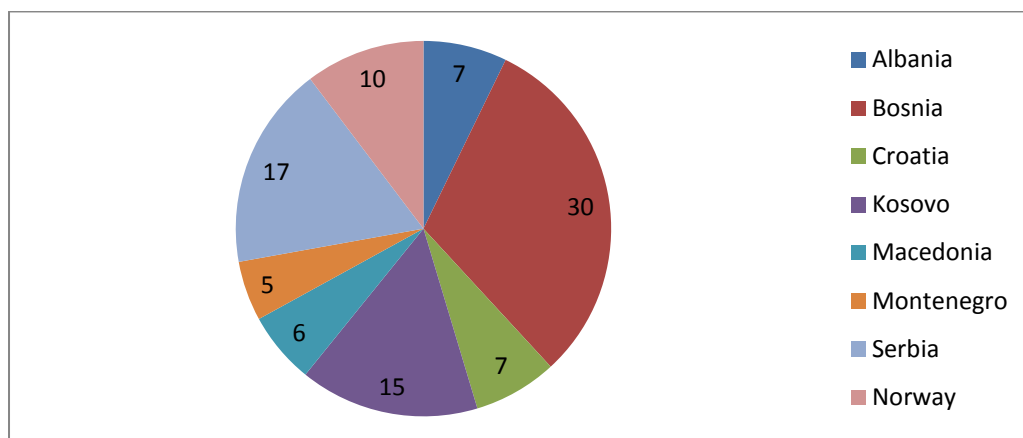
#### 4.8.1 The Respondents

The challenge with web-based surveys is that response rates tend to be low. The team expected the academic community that made up the stakeholder universe to be more than average comfortable with such surveys. At the same time the survey was being conducted at the end of the academic year when academic staff are extremely busy.

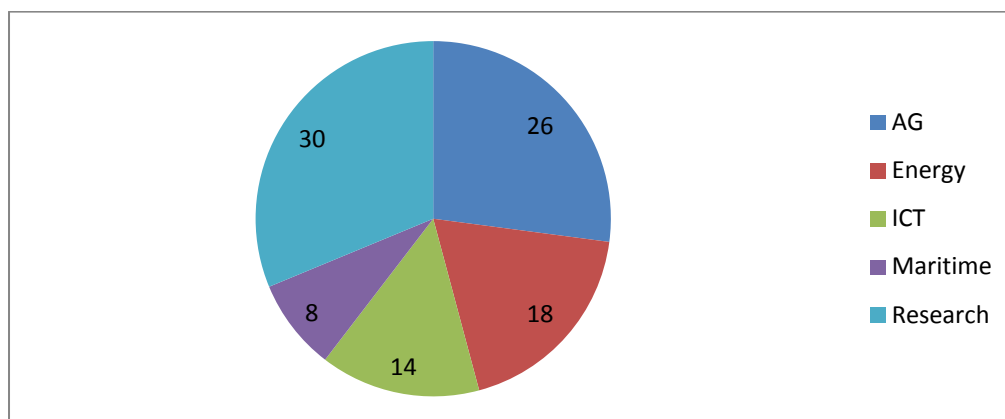
The team was therefore very pleased to see that 97 stakeholders filled out the survey. As can be seen from Figure 4.1 below, there were respondents in all seven Western Balkan states as well as Norway, with the single largest contingent being from Bosnia. While Croatia at this point was no longer receiving Norwegian funding, stakeholders there nonetheless participated in the survey, and while the team did not visit Albania, Croatia or Macedonia, the response rate in these countries was still around the average for all the countries.

The team takes this as an indication of a very strong commitment to the programme and a desire on those who had been involved with HERD, whether they were visited by the team or not, to have their views heard – and in particular that there clearly was an interest in conveying some very positive messages, as will be seen below. The numbers in the various “pie slices” indicate the number of respondents who have answered or fit into that particular response/ category.

**Figure 4.1: Number of respondents by country**

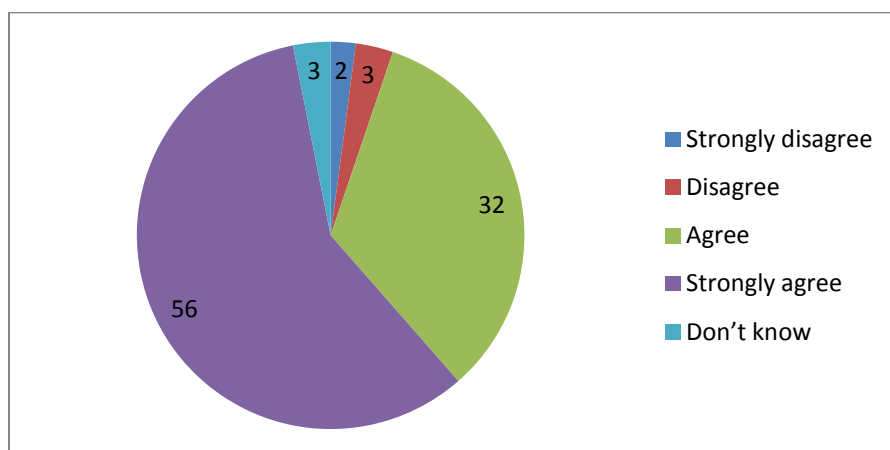


The respondents also reflected quite well the composition of the sector structure, as seen in figure 4.2 below, where it was exactly the agriculture and development sectors that had the largest number of actors involved.

**Figure 4.2: Respondents according to the five sectors**

#### 4.8.2 Project Results

Regarding the actual survey questions, nearly 60% *Strongly agree* and over 30% *Agree* that their project had delivered the planned results – a very impressive overall achievement (see figure 4.3). This is reflected in comments submitted with the survey, such as “has delivered the planned results. Examples of such results are institutional development in local institutions, curriculum development, study visits, organization of joint workshops, purchase of field laboratory and office equipment, development of teaching and research methodology, project web site, participation of faculty technicians at different workshops and symposiums, and joint researches” (Annex I citation a.11) and “The project completely fulfilled all scheduled tasks and some additional work has been done” (Annex I a.8).

**Figure 4.3: Responses to The project has delivered the planned results**

The survey tried to address this issue from the opposite perspective as well, including the statement that the project has been a disappointment and did not deliver the results hoped for. An overwhelming 70% *Strongly disagreed* with this statement and a further 20% *Disagreed*. There were comments in the web-survey that conveyed the same message – that talking about *disappointment* and *failure* in the context of the projects would be wholly incorrect.

Perhaps even more encouraging is that the vast majority believes that their project had produced unexpected positive results (see figure 4.4). The interviews pointed to a number of such results: the pedagogical approach and teaching methods, in particular team work and focusing on problem solving so that new knowledge is applied. The links to productive

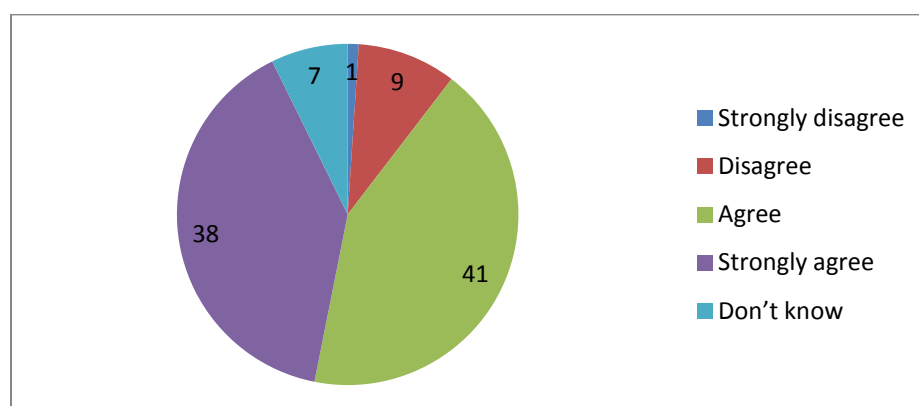


sector needs, whether in agriculture, ICT, energy or the maritime sector, were also universally appreciated. Another issue that was mentioned on a number of occasions was that HERD not only provided support to the development of new curricula, since the EU also funds such activities in support of the Bologna process, but HERD in addition provided the training of teaching staff in how to apply and work with the new materials, which was critical for successful introduction of the new study fields. The strengthening of regional networks and ability to work on common problems across state borders was not by itself unexpected, but the benefits of doing so and the obvious relief and positive feelings from being able to work with colleagues across boundaries was clearly a stronger experience than a number of the researchers had expected, and for a number of the younger researchers who had not worked in such regional partnerships before it seemed a particularly gratifying experience.

The comments in the survey note the kinds of unexpected results listed above: *“we started to cooperate with some institutions from the region that previously we did not have cooperation.... and we are planning some projects together. Students are trained for independent work, gained their Master’s theses, and published results at international conferences. Industry partners created contact among themselves and a platform for business cooperation”* (Annex I a.17). Another benefit was increased attention at political level: *“has attracted an attention in Montenegro which is far above the expected and followed closely by the Minister of Science”* (Annex I a.15).

But there were also some quite practical yet important issues noted: *“There has also been a strong focus on strengthening the English skills of staff at the University. Lack of English skills among Albanian students and staff is one of the biggest challenges for an integration with the rest of Europe”* (Annex I a.12) and *“it enabled to carry out research in rural areas that have not been investigated before which brought to the surface many problems encountered but were not given attention/priority by the municipality.... used the project as the opportunity to bring attention to issues overlooked and published newspaper articles about it”* (Annex I a.1).

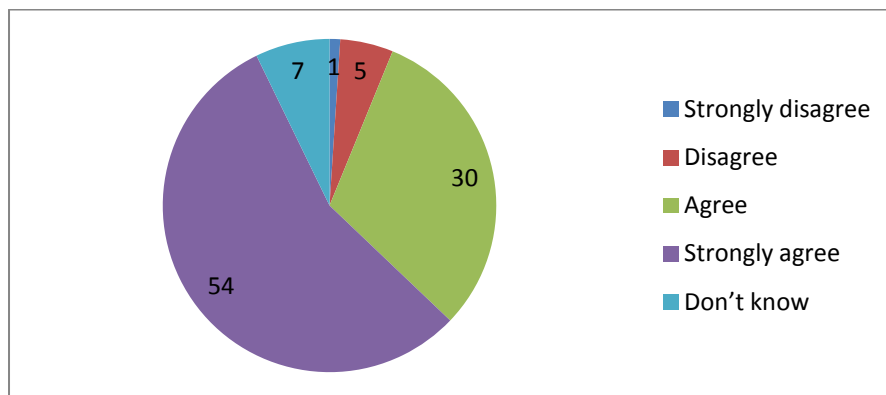
**Figure 4.4: The project has produced unexpected positive additional results**



The strengthened linkages to other universities in the region is something nearly 90% of the respondents either Agree or Strongly agree with (see figure 4.5). Some of the Disagree/Don't know responses presumably are linked to the fact that a few of the projects were centred on only one or two universities, where the two often already had historical links, so the HERD

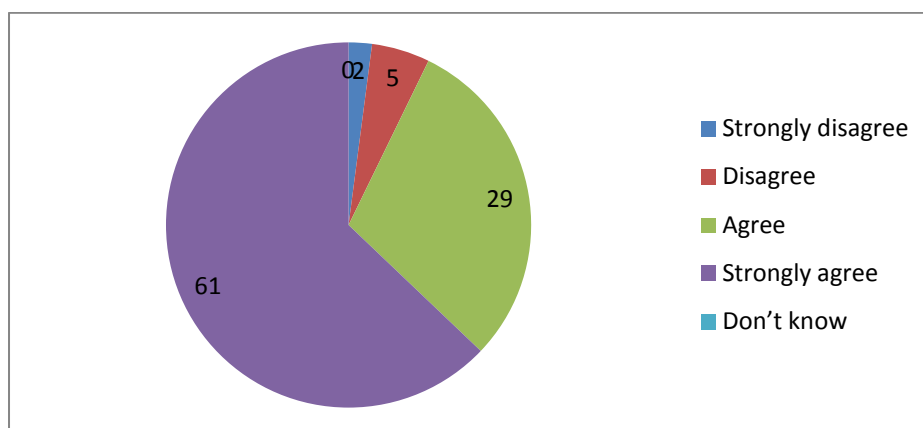
project did not provide anything new in these cases. But comments noted that *“It also helped develop better relations with the neighbouring university and research partners as in Macedonia, Albania and Croatia”* (Annex I a.1) and *“had numerous ... unexpected additional positive results, including those related to co-operation among faculties in the region after the war”* (Annex I a.5).

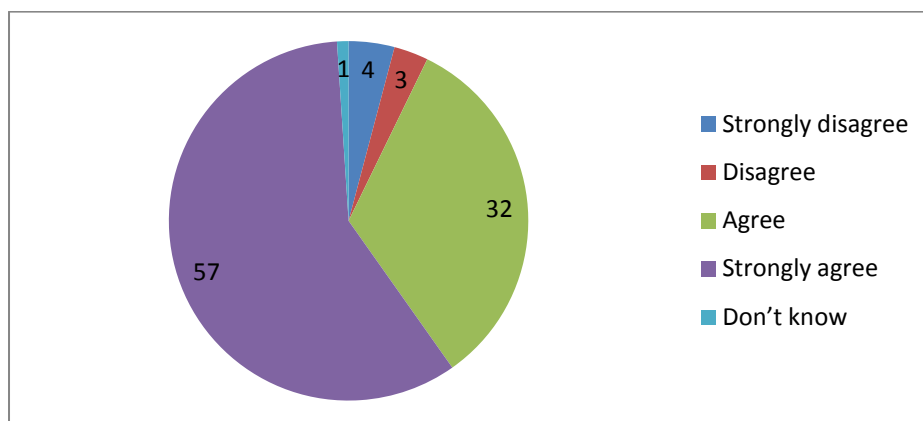
**Figure 4.5: The project has led to improved relations to other universities in the region**



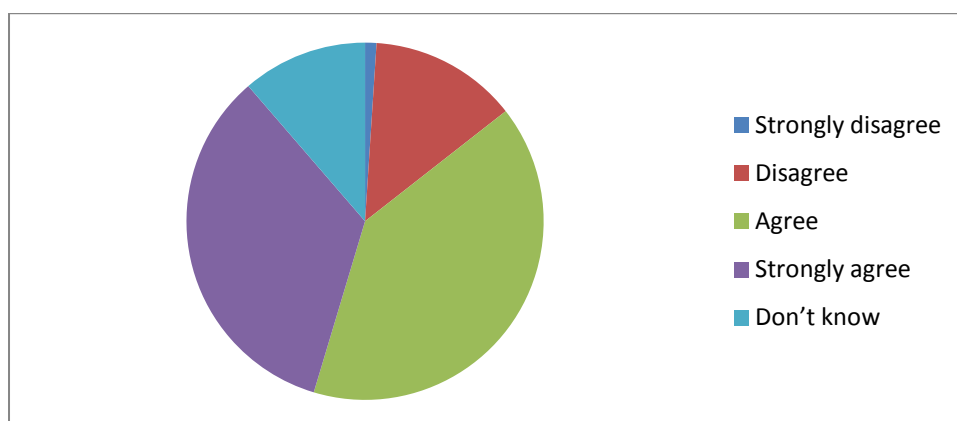
Apart from the regional linkages, the projects were seen to be useful both to the institution where the researcher worked, but also to the individual researcher's own work. It is interesting to note that the benefits to the institution were in fact seen to be a little more positive than to the individual researcher, which is very encouraging from a longer-term capacity-building perspective (figures 4.6 and 4.7). Comments received included *“This project has been highly useful to my own work, especially to improvement of my education work and research in Conservation of animal genetic resources and their utilization. It helped me to introduce new lessons for students and to publish several scientific papers as the results of project activities and two books. Additionally, this project has been also highly useful to my institution. During the project a strong cooperation among the WB institutions was formed through joint activities such as research as well as through higher education program, which is a good basis for further cooperation among WB institution”* (Annex I a.6).

**Figure 4.6: This project has been highly useful to my institution**



**Figure 4.7:** *This project has been highly useful to my own work*

When it comes to the results regarding new knowledge relevant for business and the private sector, the picture is a little more mixed, but still overwhelmingly positive: 35% Strongly agreed and a further 40% Agreed, with about 15% Disagreeing and a similar percentage Not knowing.

**Figure 4.8:** *The project produced relevant knowledge for business / the private sector*

### 4.8.3 Addressing Cross-cutting Issues

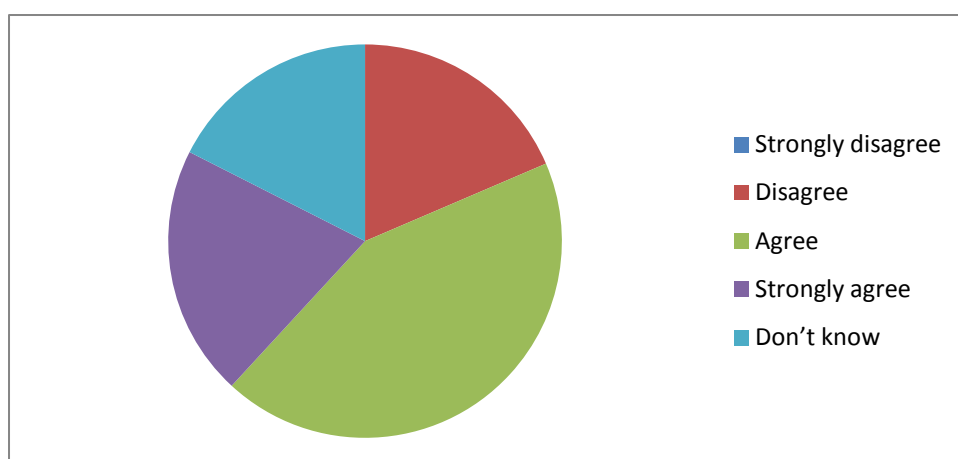
When it comes to the gender and ethnic minorities dimensions of the programme, the situation is a little less clear.

When it comes to promoting the *role of women*, this seems to have been taken seriously by many of the projects, though the starting point was quite different across sectors. In agriculture, there were examples of women making up a majority of the student population and academic staff, so increasing that ratio was not meaningful. In the engineering fields this was more of an issue, but where several projects clearly were taking the challenge seriously by giving female candidates special consideration for sponsored MSc degrees and study visits to Norway. The consequences at academic staff level will take time to work its way through the system: the number of full professorships are often stable so a female candidate can only be promoted to full professor when the current titleholder retires. In the survey, 20% of the respondents said that they Strongly agree with the proposition that the project led

to documentable improvements for women in that field, while just over 40% would Agree. While 20% Disagreed, the cause could both be that the situation did not really call for further improvements (some agricultural projects) as well as a lack of really supporting women.

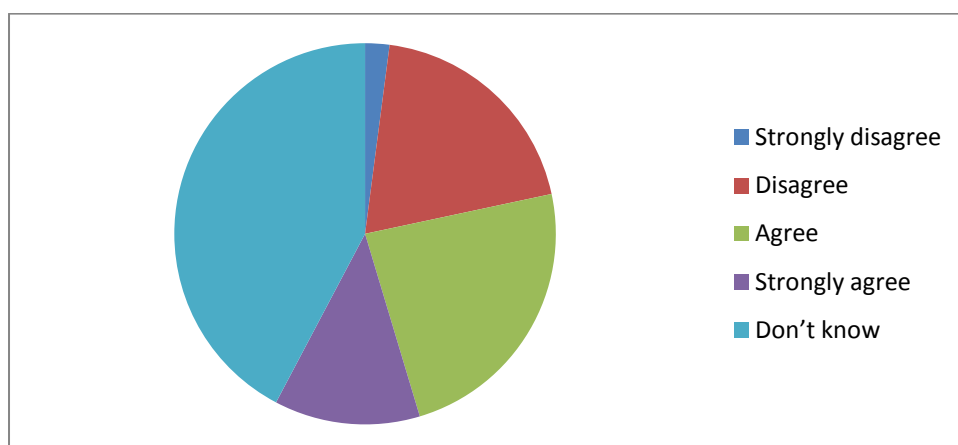
Some female staff noted that women – as many other places in the world – were making up a plurality of the student body, though there were clear gender biases in some studies. The problem was more “the glass ceiling” that female academics faced when coming up for promotions. This was both the issue of the limited number of openings at senior level but also a corporate cultural one: “the old boys’ club” was still alive and would take time to change (this issue was in fact a major reason why most of the partners in the Development studies sector were local think tanks and NGOs: so many social science researchers were seen as so set in their thinking that they would not be dynamic partners on the projects). The reporting and monitoring of the gender dimension could have been considerably better, however.

**Figure 4.9: The project led to documentable improvements for women**



Regarding support to *ethnic minorities*, this has not really been addressed, as noted. Projects were not provided any clear guidance regarding what to do, so nearly half therefore said that they did not know if there had been any improvements, nearly 20% Disagreed with this proposition, and only 10% Strongly agreed. Nearly half had no opinion, did not know.

**Figure 4.10: This project led to documentable improvements for ethnic minorities**



## 4.9 Findings, Conclusions and Recommendations

All five sector programmes have contributed to improved *higher education*:

- New study programmes/curricula, especially at MSc level, have been introduced;
- New topics or dimensions have been included in existing BSc and MSc programmes;
- A number of PhD students have spent time in Norway on their thesis work;
- A substantial number of BSc and MSc students have spent from one month to a semester in Norway in connection with their thesis work, some also having internships at Norwegian companies;
- A number of staff exchanges have taken place, both from Norway to the Western Balkans, and vice-versa;
- More modern pedagogical approaches based on problem solving, applied research and team work in line with the Bologna process have been introduced and trained in;
- Regional networks have been established, strengthened, expanded and made operational through joint research projects, seminars and learning events;
- Some equipment, especially for laboratories and distance learning, have been procured and installed, to enhance research and experience exchanges.

*Research* has been strengthened:

- Applied research has been given considerably more attention;
- Field work and working with industry in developing research topics for a graduate degree has increased;
- Original research was given priority in the Development studies programme;
- A large number of joint research projects leading to academic publications have taken place;
- The regional networks are beginning to produce original research and leading to more cross-regional academic publications.

*Innovations, Business Development and Employment Creation* have been parts of all sector programmes, though to somewhat varying degrees:

- The ICT sector has probably developed the strongest links to and contributions to the private sector through its activities;
- The Agricultural sector has funded a number of applied research projects that have developed concrete and market-relevant products and results;
- The Maritime sector is developing new services and training, focusing on international markets, support to local maritime and cruise industries, and local aqua-culture;
- The Energy sector has concentrated on sustainable energy in its training and research, preparing for the industrial and energy transitions expected over the coming period;
- All new higher education programmes are focusing on improving the relevance not only in terms of contents but also pedagogical approach, stimulating inventiveness and confidence in own skills, in some sectors promoting entrepreneurship.

*Gender equality* has generally been supported, though reporting and monitoring of the gender dimension has been variable. Support to *ethnic minorities* has largely not been addressed largely since there has not been a clear specification of objectives and targets.

*Norwegian partners* are generally commented on in very favourable terms (see Annex I):

- In all sectors, Western Balkans partners experienced their Norwegian partners as professional and committed to the programme, and generous with their time and knowledge;
- Communications were good, informal, non-bureaucratic. Response time to inquiries was short, and local partners appreciated the immediacy and equity in interactions, which was seen as facilitating rapid exchange of experience and knowledge;
- Norwegian *institutions* and *project coordinators* were praised regarding the facilitation of visits, access to literature, ability to find solutions. The fact that some coordinators have their background from the Western Balkans was seen as being helpful especially in start-up phases when there were uncertainties and problems to overcome.

The *unexpected positive results* were important:

- Strengthened collaboration between W Balkans institutions meant a reestablishment of broken networks for the older generation of researchers; establishing networks for the younger generation which was often a revelation for them; overall that they now work on joint projects and processes and not just bump into each other at conferences.
- HERD funding, though limited, was often the most important for actual research and thus provided resources for university staff to re-engage in scientific research, publish, present at academic events. The review team was given the impression that many staff felt empowered, validated as researchers, that their institutions were being taken more seriously as knowledge *producers* and not just knowledge *transmitters*. In some universities there was a feeling that they had been marginalised by the academic community for many years and now were taking their rightful place at the table again.
- Norwegian institutions are benefitting from the collaboration in several ways: since Western Balkans universities are sending top students to Norway, Norwegian students have had to improve their performance; research results, especially in agriculture, are now being applied in Norway; Norwegian institutions have a richer and better network of partners in the region, and the potential for further collaboration has increased.

## Conclusions

- The HERD programme strengthened curriculum development, pedagogical changes and capacity building, including through staff exchanges and study visits to Norway.
- Peer-learning has been increased through new or expanded inter-regional ties, though with uneven intensities across sectors.
- Links to the private sector have been strengthened but at different rates, in part due to sector characteristics. The transition to more decentralised and “green” energy faces great uncertainties, while in ICT there is a dynamic that is already creating demands for new skills and knowledge. The Maritime and Agriculture sectors are more supply-providers, developing new services and qualities for which they expect there will be an increasing demand, though this demand-dynamic so far is weak.
- Gender equality has been taken seriously though reporting is not systematic. Support to ethnic minorities has suffered from lack of clarity regarding actual objectives.

- The Norwegian actors have been pro-active and constructive partners throughout the period and across sectors, according to their Western Balkan partners.
- The interpretation of what the main objectives of the HERD programme are, varied across sectors. The Energy sector focused on curriculum development, staff upgrading and student exchanges. The Maritime and ICT sectors have been more concerned with the linkages to the private sector and *Employment*, with Agriculture somewhere in between, with its attention to applied research along with academic strengthening. In the Development studies programme, one project was all about the research, working with researchers who did not need any skills upgrading, while the others were more concerned with the capacity building and networking dimensions.
- At the same time, HERD's "foot-print" is limited to a few sectors, "spill-over" effects from innovations like pedagogical approaches to other faculties have not been mentioned – the only exception seems to be the multi-functional labs in the Energy sector that are open to all university members.

**Bottom line:** Projects and sectors have produced expected Outputs and delivered important additional positive results such as strengthened regional networks. These have led to more joint undertakings due to the sense of validation along with the resources that projects have provided. A number of projects can point to results also at Outcome and Impact levels.

### Recommendations

- The HERD programme is a highly successful programme that is providing unique support in line with the Bologna process. It should thus be continued for a further (final?) period, building on results to date and ensuring successful conclusion to Norway's support to academic development in the region based on regional reconciliation and joint progress.
- The programme period should be sufficient for meaningful project results but also to allow for possible "lag" components to be concluded in an orderly and predictable manner (possible PhD studies etc). A programme horizon of 5-7 years with a "core period" of 4 years where all substantive work is to take place could be considered, and with a tapering off period with diminishing budgets that can include no-cost extensions of planned activities that experienced delays.



## 5 Ownership and Sustainability

The direct results from Norwegian funding – the Outputs – are important, as laid out in the previous chapter. The medium- to long-term Outcomes – the consequences of applying the Outputs – and the Impact – the long-term effects of these Outcomes – are the real results desired, however. These depend not only on the Outputs produced but also the degree to which the projects address relevant needs, are truly owned by the local partners, and the extent to which these results are sustainable.

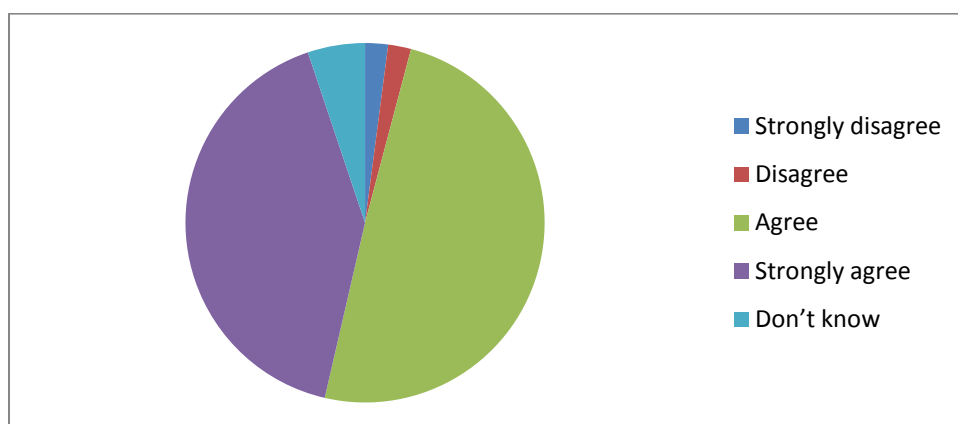
### 5.1 Local Ownership

While the HERD budgets are rather limited compared to the funding needs across the Western Balkans, they appear to be quite significant for the local partners involved.

One thing is that the fiscal problems faced by all the states in the region means that budgets for the universities are largely restricted to financing operations: salaries for staff, operations and maintenance of facilities, and student costs (scholarships, student housing etc). For institutions spoken with, funds for new equipment and upgrading of facilities are difficult to come by, and financing for research even more so. While there is considerable EU financing available, it is often restricted to student exchanges, joint research projects with EU member state universities – where the local institutions often feel they are treated as junior members – and upgrading of curricula to align with the Bologna process.

One of the questions asked both during interviews and in the survey was the extent to which local partners felt the projects were based on their priorities rather than those of the Norwegian partners. The answer there was very clear: in the survey, over 40% said that they *Strongly agree* and a further 50% *Agree* with this statement (see figure 5.1). The comments provided in the survey confirmed this (see Annex I section b), as did the interviews, where local partners consistently praised the Norwegian partners for being listening in their approach.

**Figure 5.1:** *The project was based on priorities set by the Western Balkans partner/s*



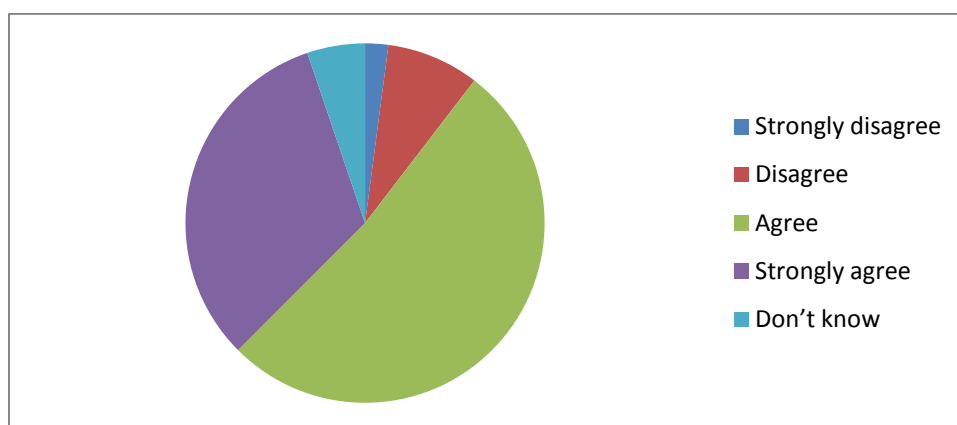
Perhaps of even greater importance was the response to the statement that the projects had been developed by the Western Balkans partners. 30% said that they *Strongly agreed* while a further 50% *Agreed*. Just over 10% either said that they *Disagree* or *Strongly disagree*. The positive response rate turns out to be somewhat higher for the energy and agriculture



sectors, which is natural, since these are sectors where the current projects often are continuations of longer-standing collaborations and where both parties now know both how to formulate projects so that they will be approved, and also have the trust relations in place that provides for a more equitable partnership.

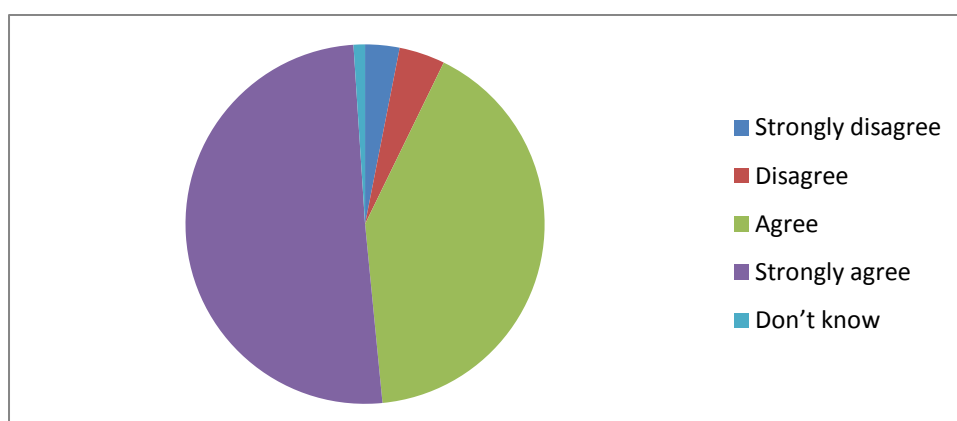
The survey results are supported by comments provided in the web-survey and are consistent with what was heard during the interviews: *“Project was developed in close cooperation between Norwegian and Bosnian institutions”* (Annex I b.3), *“The project was based on priorities set by the Western Balkans partners”* (Annex I b.5), several others (see Annex I section b).

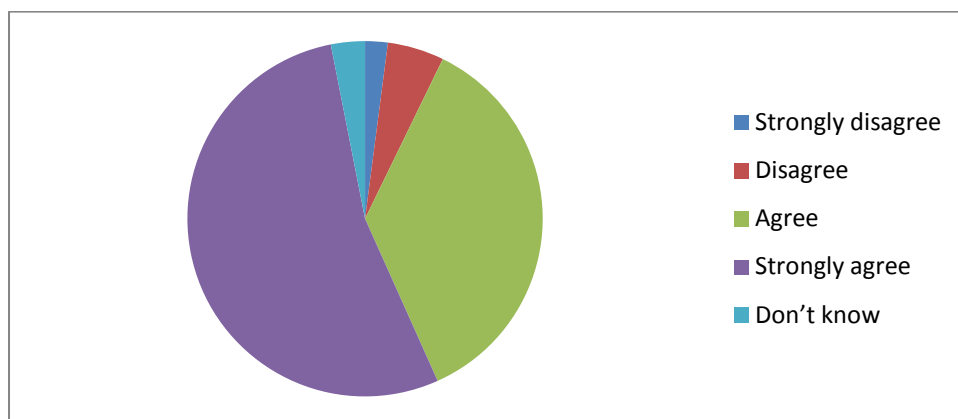
**Figure 5.2:** *The project was developed by the Western Balkans partner/s*



Furthermore, Norwegian and Western Balkans researchers felt that both colleagues and their own management were supportive of the projects, which also speaks to the positive image that the HERD projects have achieved in the region. Over half *Strongly agreed* with this when it came to the support from colleagues and superiors and a further 40% *Agreed*, and the percentages were even higher when it came to perceived support from management. This is again reflected in the comments received: *“Management of my institution gave strong support to the Project especially activities related to implementation new curriculum for postgraduate students”* (Annex I b.5) and *“The project received strong support from my colleagues at the Department of Genetics at Faculty of Agriculture, Chef of Department, Director of the institute of Crop Sciences and the management of my institution, including dean and vice-deans”* (Annex I b.8).

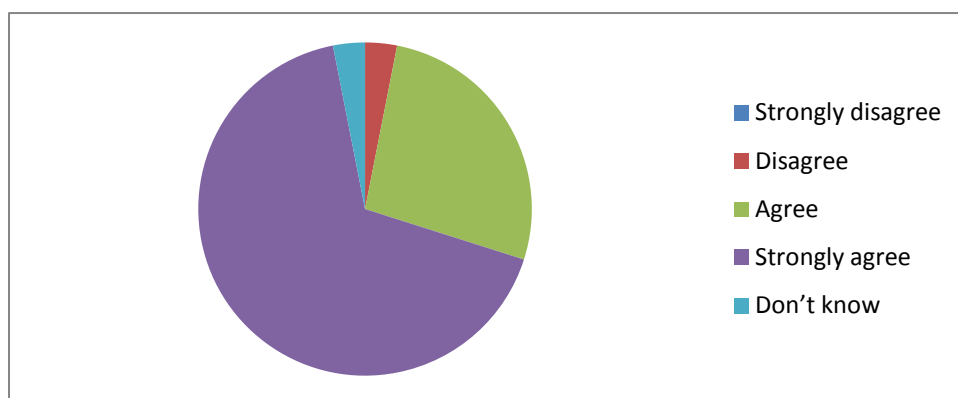
**Figure 5.3:** *The project received strong support from my colleagues and superiors*



**Figure 5.4:** *The project received strong support from management of my institution*

## 5.2 Relevance of Sector Projects and Programmes

While the HERD funds are limited, they are important because they are seen to respond to the local needs and thus exhibit very strong local ownership, as shown above. This view is also reflected in the survey, where nearly 70% *Strongly Agree* that the projects provided innovative impulses to the work of the local partners:

**Figure 5.5:** *The project provided innovative impulses to the work of WB partners*

But just because researchers may be very positive about the projects does not mean that the projects themselves are all that valuable to society, since HERD “*aims at contributing to economic growth and social development in the Western Balkans*” (see Annex A Terms of Reference).

The review team neither had the time nor the competencies to assess the real relevance of the projects and programmes. However, there are aspects of the sector programmes that merit some reflection as a background to any possible continued support in these fields.

### 5.2.1 Agricultural Sector

As noted in section 4.1, the *agricultural sector* is important in terms of employment but less so when it comes to its share in the economy. A number of researchers pointed to the challenges the region faces as it becomes more tightly integrated into the EU and thus will face much tougher competition in agricultural markets. The claim was that the countries are

already losing out, as the sector is under-capitalised with low productivity and insufficient quality, poor marketing and lacking clear national policies<sup>3</sup> and strong actors to push a new dynamic in the sector.

To the extent this analysis of the situation across the region is more or less correct, the agricultural sector is facing huge and structural challenges. The question is thus how the HERD financing is addressing this scenario, especially at the overarching levels.

On the one hand there is the *structure* of the agricultural portfolio. It is by far the largest and most fragmented, which itself may be an issue (it should be noted that the sector itself does not agree with the characterisation of the programme as fragmented). Furthermore, while some projects include a number of universities and states, others are much more localised, meaning that the degree of trans-border networking and setting up peer learning mechanisms is highly variable.

A second dimension concerns the *focus and contents* of the various projects – to what extent they are addressing the strategic issues in the sector. The project looking into agricultural adaptation to climate change clearly has such an ambition, and others that look at research, education and knowledge transfer promoting entrepreneurship in sustainable use of natural resources or education and transfer of knowledge in the area of food technology may also fit this category. On the other side are projects with much more specialised concerns, such as improving a local cheese or fruit genetic resources.

Finally, the programme was to have *value chains* as a strategic/analytical approach to addressing problems. The point was to ensure that projects deliver answers that can help farmers increase their incomes, improve the competitiveness of rural production, and thus provide for more robust rural livelihoods.

The extent to which these three dimensions have been addressed – and indeed if there is a trade-off between them – this team was not able to address. Trade-offs may be that narrow subjects can provide clear-cut answers and thus be directly market-relevant while larger concerns about climate change may have problems landing operational answers.

Another concern the review team raised with some of the projects was if there was a good socio-economic study behind the choices made – on the margin could the HERD funds be justified as providing the highest likely return to effort? Several researchers said that they had invited colleagues from economic faculties to support them in such analyses on some projects, only to be rebuffed because they did not have funding for this – “they will only come if you pay them”. But the challenge remains for the HERD sector programme and may be worth looking into more carefully for a possible future phase<sup>4</sup>.

---

<sup>3</sup> In one of the countries, researchers noted with a sigh that national policies are so general as to not provide any priorities; there is no funding to follow up political statements; and as soon as government changes, whatever policies and priorities were in place would be changed, leading to a total lack of predictability and consistency in a sector that requires long-term coherence across dimensions like agricultural research, land improvement and farmer investments for land- and labour productivity to grow over time.

<sup>4</sup> Scanteam has looked at other agricultural research twinning schemes where the selection of projects was in part a function of who was interested more than a strategic selection process. Some research projects continued for years due to the partnerships and mutual interests established rather than the real value of further work in that field. Another factor was the “researchability” of the topic rather than its importance: narrow technical

The agricultural sector programme is undoubtedly looking into a sector that requires a lot of research and development across the region. But it may be that a critical look at the criteria for allocating funding across topics could help define a more strategic portfolio.

### 5.2.2 Energy Sector

The *relevance* of the environment dimension for the energy sector seems obvious, and a number of the Western Balkans partners talked about the need for an energy transition in the region towards more decentralised and “green” energy, which the HERD programme clearly was in support of. The Energy sector therefore appears to have had the most *strategic* approach in the sense that it has taken a clear thematic and developed it across the region, involving the largest number of universities in the largest number of countries, and with a structured approach to regional collaboration that includes concepts like the Summer Schools. The strengthening of distance learning capacities and thus assisting universities to interact more effectively within the region is another development that merits support. Finally, the link to private industry as the starting point for academic training and research has been very useful and introduced a valuable dynamic in the sector.

One question is if so much progress has been made that future support can be reduced to a lower level. The region can maintain contact with Norway while developing their regional linkages and learning relying primarily on own resources since the actual energy transition itself has not really begun yet, so the desired interplay university⇌industry is yet to develop to any significant extent.

### 5.2.3 ICT Sector

The ICT sector is looked to as a dynamic growth sector, and one that in any case all segments of society – private business, public administration, households – are relying more and more on. The *relevance* of the sector is thus beyond question. The issue is if the HERD programme has provided a good strategic approach for Norway’s support to the sector.

The AEP’s focus on basic university training at the BSc level rather than at the MSc level seems to have been appropriate (though there was also some Master’s and PostDoc training), given the identified needs, and having students from the three states working together is useful.

The geographic concentration of the other ICT projects in Republika Srpska is problematic from a regional development perspective since this is one of the more challenging platforms for ensuring spread effects in the region. While the contents of each project is undoubtedly relevant to the various needs identified, for the larger regional dynamic is raises questions<sup>5</sup>.

---

issues often lend themselves more to scientific scrutiny and thus generate publications while complex systemic issues typically require longer time-horizons than 3-4 year projects can provide and often fewer publications.

<sup>5</sup> In its observations to the draft report, the ICT sector noted that it had in part relied on the EU SCORE project, which was to strengthen the EU-Western Balkans collaboration in ICT research. SCORE in fact produced four ICT strategy papers: for Albania, Bosnia, Macedonia and Serbia. HERD has clearly only used the Bosnia one, and even there the core fields identified by SCORE are not really reflected in HERD’s ICT work.

#### 5.2.4 Maritime Sector

Like the ICT sector, the Maritime sector can be seen to address two different issues: the links between local processing industry and research, and the off-shore labour market. While the first is undoubtedly *relevant* for the coastal economies of Albania and Montenegro, the two main partner countries, the off-shore training appears more speculative in terms of likely results, in particular when it comes to the effects on the local economies. Apart from possible employment for those who successfully complete the training it is not obvious what the benefits to society at large would be, and thus why development grants should on a priority basis go to this activity. Both dimensions of the programme appear to have strong political support, but Norway may wish to consider what it wants to concentrate its resources on.<sup>6</sup>

#### 5.2.5 Development Studies Sector

The research topics in the Development Studies sector were mostly developed by the local institutions in collaboration with their Norwegian partners. They stressed that the areas they focused on had not been sufficiently researched before and therefore highly *relevant*. The intention was also that research findings would contribute to improved policies in the region by reaching out to policy makers with the findings from the work.

The questions one may raise about relevance are similar to the ones in the agriculture sector. There were six projects that were approved basically on their research merits and not from a more strategic perspective – either regarding capacity development (one project explicitly did not address this since it was working with experienced researchers) or from expected contributions to public information and debate.

Regarding building research capacities of social science researchers, this is seen as highly relevant by the local partners. There are no other funding streams supporting capacity building in the region, especially outside the universities. Research funding schemes such as the EU's *Horizon 2020*, support excellent research so it is difficult for researchers without considerable experience to apply for such funds. Participating in the HERD programme increased the chances to become parts of consortia applying for *Horizon 2020*. At the same time there is perhaps a contradiction in the Development studies programme focusing on independent think-tanks and NGOs rather than universities, since the latter tend to have more stable faculty and capacity development may thus be more sustainable (though if faculties are not really forward-looking and interested in innovative social science research, it becomes a moot point, so there is no simple solution to this question).

Regarding the expected contributions to public information and debate, the HERD programme was “to provide insight into development challenges by supporting regional social science research in the Western Balkans” (Terms of Reference, Annex A). Some projects clearly address this, and here the choice of working with more independent institutions may produce more publicly available data and debate since a number of these bodies are also

---

<sup>6</sup> The sector secretariat believes this view of the off-shore training is wrong, since it – as noted earlier – includes harbour pilots, cruise ship management etc. It also notes that desk-hand jobs on-board are being lost to low-wage economies and that there is a need to upgrade staff to compete for the more skills-demanding jobs. But the argument above in this case still stands: the benefits accrue to the individuals and the spread-effects to the larger economy remain difficult to identify.

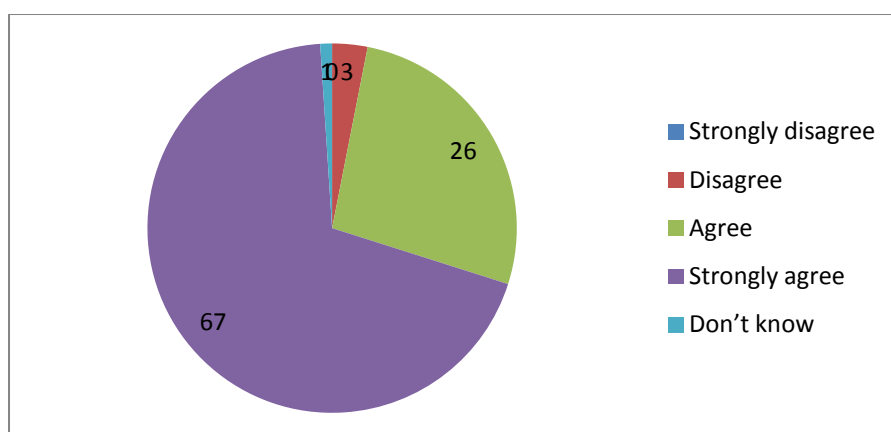
engaged in advocacy work. The extent to which they succeed in reaching public opinion and decision makers would be important to follow.

### 5.3 Sustainability

There are several sustainability dimensions that can be considered. The first one concerns the links between the Norwegian and Western Balkans partners: when HERD funding ceases, what is likely to happen to these relationships? Part of the answer can be found in one of the survey questions, where an overwhelming 70% said that they *Strongly agree* with the notion that the HERD programme has contributed to longer-lasting relations and a further 27% *Agree*.

The researchers spoken with in the field also pointed to the stronger *regional networks* as clearly sustainable since they have identified common issues that they would like to work on together – both research and training.

**Figure 5.6:** *The project has contributed to more sustainable relations between the partners*



Whether the specific research fields will remain will undoubtedly vary from one issue to another. The need for continued agricultural research and development is obvious but which specific topics will attract funding in the future is difficult to predict. Climate change and adaptation is likely to need and receive further funding – some of the other projects have largely achieved their objectives and therefore do not need much external funding. In the energy field, the energy transition remains highly relevant and thus will continue to receive a lot of local attention. The challenge will presumably come once the energy transition really begins unfolding and more specific answers must be produced.

The sector with the greatest challenges will undoubtedly be the social sciences Development activities. One thing is that the actors themselves tend to be smaller with less solid funding and institutional capacities than the public universities that are involved in the other four sector programmes. The other is that the research topics themselves tended to be more “issues of the day” and thus potentially not requiring the same level of sustainability as for example the energy transition or agricultural development. But if there is a need for further work on the issues, if Norwegian funding lapses the projects may face serious challenges as alternative funding sources have historically been difficult to find.



The major factor that will ensure sustainability is that the local institutions in fact have considerable own capacities and expertise themselves. If they wish to continue giving priority to issues that have been worked on with the Norwegian partners, the likelihood of sustainability in terms of continued focus on that field would appear to be reasonably good.

## 5.4 Findings, Conclusions and Recommendations

Local *Ownership* to the HERD programmes was strong across all five sectors:

- There was strong agreement that the individual projects were based on priorities set by the Western Balkan partners;
- There was also clear agreement with the statement that the actual development of the projects had been developed by the Western Balkans partners. This was particularly strong in the sectors that built on historical relations – agriculture and energy – whereas in the ICT sector some local actors felt that one of the original project managers did not listen as much to them as they would have liked;
- There was strong agreement that the projects were supported both by management and by colleagues and immediate superiors, which is important since external project funding can easily generate resentment if funding is not seen as important to the institution as such.

The *Relevance* issue needs to be seen at three levels: the HERD programme as such; the five sector programmes; and the individual projects within the programmes. The overall HERD programme is addressed in the final chapter and thus also its relevance.

The five sectors are clearly relevant to the challenges that the WB region is facing. The expertise and experience that Norwegian partners have provided have been seen as highly relevant: local actors expressed appreciation of the skills and knowledge that the Norwegian institutions could impart, both due to the scientific excellence but also the applicability to the issues the WB actors were facing.

The real question has been relevance of the projects – not because of their results, but because selection may have been too much based on scientific excellence rather than relevance to the objectives set for the programme: (i) *educating a national workforce ... [through] sustainable capacity of higher education institutions in Bosnia & Herzegovina and Kosovo*; (ii) *stimulate innovation, product and process development ... through support to applied research and development*; and (iii) *provide insight into development challenges ... in the Western Balkans*.

- The *Energy sector* has had a fairly clear strategic focus, building on earlier work and strengthening the contents of the educational work but also extending and deepening the “horizontal” linkages among the universities in the region, providing tools (i.e. trained staff, PhDs, multifunctional labs) and approaches (i.e., industry-university links, mutual learning through summer schools) that address the issues and point towards an exit strategy based on sustainability of results and relationships;
- The *Agriculture sector* has a more diversified project portfolio in terms of subject matter, degree of geographic coverage, links to agricultural producers and agro-industries on both the input and output sides. It is difficult to fault the programme for a lack of strategic consistency since the different states do not themselves have any

joint policy and even internally appear not to have consistent long-term visions. Nonetheless, it could be useful to discuss what the ever tighter integration into the EU means in terms of challenges to the region and thus how Norway can best support the transition in agricultural policies and practices that appear on the horizon.

- The *ICT sector* has divided its attention in two: an educational project covering three states, and an applied component focused on Bosnia. The educational project only included Kosovo of the two countries that were to be addressed, while the more broad-based general component was narrowly focused on Serb-speaking areas.
- The *Maritime sector* has concentrated on the two coastal neighbours of Albania and Montenegro, succeeding in establishing good working relations and mutual learning projects. The question is if the capacity building for off-shore work is addressing a real labour market need with spread-effects to national economies.
- The *Development studies sector* is an assembly of research projects with only a weak common thematic, different degrees of capacity development, and with partnerships with organisations that may have weaker institutional and financial foundations but most likely provide more relevant research, results and external communications of findings since a number of them are also engaged in various levels of advocacy work. Whether all provide insight into what can be termed *development challenges* is less obvious.
- What is missing is clearer and more operational guidance from the MFA regarding what it expected from the three overarching objectives for HERD. The 5 sectors applied different criteria when putting together their portfolios, without the MFA reacting to this. This particularly stands out when it comes to regional collaboration, where it might have been useful if the MFA had more strongly encouraged projects based on issues of common interest across the region, or that constitute common challenges for their EU accession processes. Without this, it is not clear how Norway's interest in supporting regional reconciliation and collaboration – the overarching objective for Norway's continued support to the region – is being advanced.

### Box 5.1 Principles for Programming HERD Sectors

Both the MFA and several sector secretariats disagree with this review's conclusion that the MFA should have imposed clearer guidance for compiling the sector portfolios. The principle of handing over the responsibility first to the sector administrators and then to the collaborating partners, to ensure local ownership and relevance, has been important. The view is that this project-by-project bottom-up will ensure best quality projects and thus greatest value for money.

The issue, as Scanteam sees it, is that the HERD funding is from Chapter 164 in the State budget, "*Peace, reconciliation and democracy*". All projects should be expected to have a link to this overarching concern. One approach is to ensure that all projects are trans-border, and in particular cross the fault lines of the break-up of Yugoslavia (contributing to "bridging capital" in the language of social capital studies). This is simple to do and does not affect the *contents* of the project or in any way reduce the research and scientific value of a given initiative (it may require a larger budget to include more partners, but this would exactly be one of the strategic decisions the MFA could take).

Another possibility is to look for strategic documents, such as the EU SCOPE project that identified both principles and areas for ICT work. Through workshops with research milieus one could identify which of these HERD could support. Similar EU strategy studies exist for a series of sectors and states and could ensure documentable relevance to challenges the various accession processes are facing – another objective for Norwegian support in the Western Balkans.

The *Sustainability* of the programme varies by programme dimension. The links between Norwegian and WB partners, and among the WB partners, appear solid and likely to sustain themselves as long as they are addressing issues of common interest. The sustainability of project results will vary. Projects that have been able to successfully complete their work will probably be sustainable since host institutions – generally public universities – have an own-interest in maintaining and applying the project outputs, such as new curricula, teaching approaches, but first and foremost increased own skills and knowledge. One reason even incomplete projects may experience sustainable results is that almost all the WB partners feel that their own capacities and competencies have improved, meaning that their capacity to compete for future resources such as EU funds under *Horizon 2020* has improved. But a number of the individuals that have been trained under the programme may have problems finding employment at universities so their acquired skills and knowledge may be lost.

### Conclusions

- Local *Ownership* is strong, with activities largely defined by local actors, project designs reflecting a strong local role, with strong support from own management.
- The *Relevance* of projects is generally argued in project-specific terms rather than from a sector-strategic vantage point. It is therefore difficult to ascertain their relevance to national aspirations, also since states themselves exhibit limited consistency of vision.
- The selection of the 5 sectors can be justified, but the sector *portfolios* vary in apparent relevance. The MFA itself has not clarified what it would consider success criteria for the HERD objectives. Overall, the *Relevance* concern could have been better addressed through better guidance and feed-back from the MFA as the portfolios evolved.
- The *Sustainability*, typically the weak spot in collaborative programmes, is quite good since ownership to the activities appear strong and local partners have institutional solidity, a reasonable financial base and considerable technical capacities.

**Bottom line:** The HERD programme appears as a major success, due to the dedication and professionalism that both sets of partners have exhibited and the strong *Ownership* to the activities in the region, something that is likely to ensure a high degree of *Sustainability*. The *Relevance* to national and regional development needs is more uncertain due to lack of clear criteria for project selection and heterogeneous sector portfolios.

### Recommendation

- The HERD partners should organise a learning/planning event to look at (i) what has been successful in terms of local capacity building (staff exchanges? student exchanges? regional events? distance learning? focus on contents vs. approach? links to external actors/private sector?); (ii) what should be focus for coming period (regional networks – broader, more inclusive partnerships? thematic focus – EU membership challenges? own academic excellence? regional economic development? modernisation of pedagogical approaches across universities and region? regional reconciliation?...); (iii) how to ensure best possible *programme/ project portfolio* within each sector – bottom-up applications with minimum criteria (partners from at least 3 states? some active outreach to other faculties? etc) and clear strategic guidance from MFA (broad regional engagement? broad university-wide learning where possible?

focus on systemic rather than narrow technical issues?); (iv) should consider if a needs assessment for each sector may be helpful, since some projects appear to be based on personal networks rather than strategic considerations.

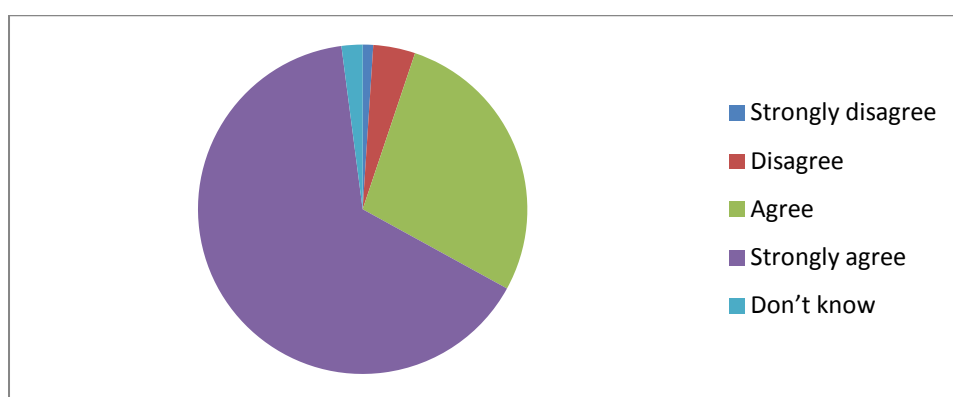
## 6 Project and Programme Management

The HERD programme has been quite decentralised. This has allowed the five programme areas to structure their interventions somewhat differently, as noted above. One question is if this has had consequences for the overall management and efficiency of the programme.

### 6.1 Efficiency of Project Management and Partnerships

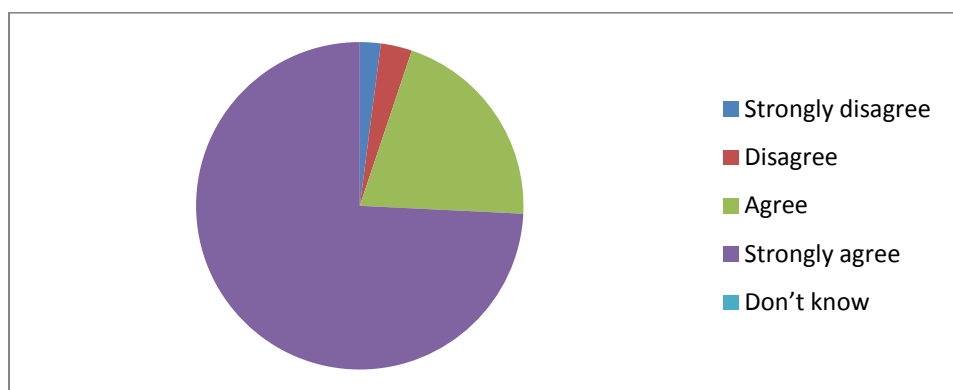
For a programme as large and complex as HERD, the review team was pleasantly surprised to hear that virtually all stakeholders felt their project was well managed and efficient. Figure 6.1 shows that well over 90% of the respondents *Strongly agreed* or *Agreed* with the statement that project management in their institution was clear and efficient.

**Figure 6.1:** *Project management in my institution has been clear and efficient*



An even greater share had *Strongly agree* as their response when it came to the relationship with their main partner, either in Norway or in the Western Balkans, when it came to project management. This is also reflected in comments received, such as “*Excellent project management, excellent collaboration*” (Annex I c.4) and “*Project management team, organization and implementation of the project, was very efficient. All people were very helpful and open for collaboration*” (Annex I c.16). Some WB stakeholders note that the project led to their own project management being improved, such as “*We learned very much from NTNU how to organize work efficiently*” (Annex I c.3).

**Figure 6.2:** *Relations to my main partner (in Norway/WB) have been easy and constructive*

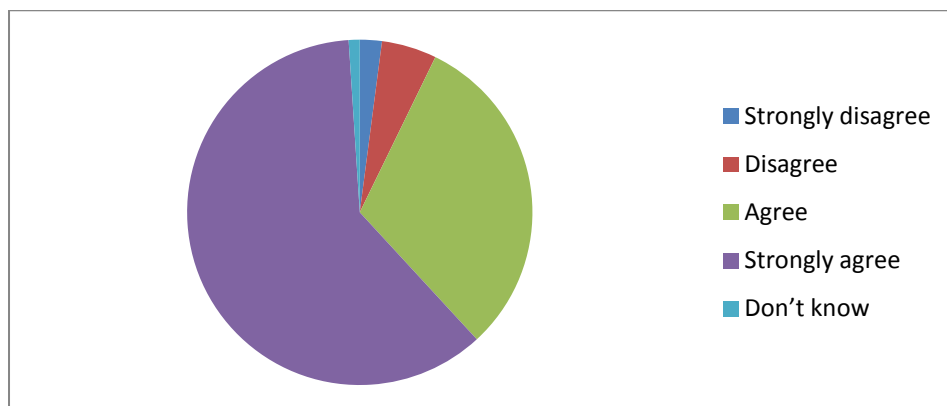


One particular project in the ICT sector experienced some challenges, noting that “*There was a lot of changes in the Project Management which was initially planned to be run by a Project*

*Management organization, but was taken over by the Norwegian Lead Institution itself. These changes caused significant delays and confusion about the overall management” (Annex I c.12), so some bumps in the road were experienced.*

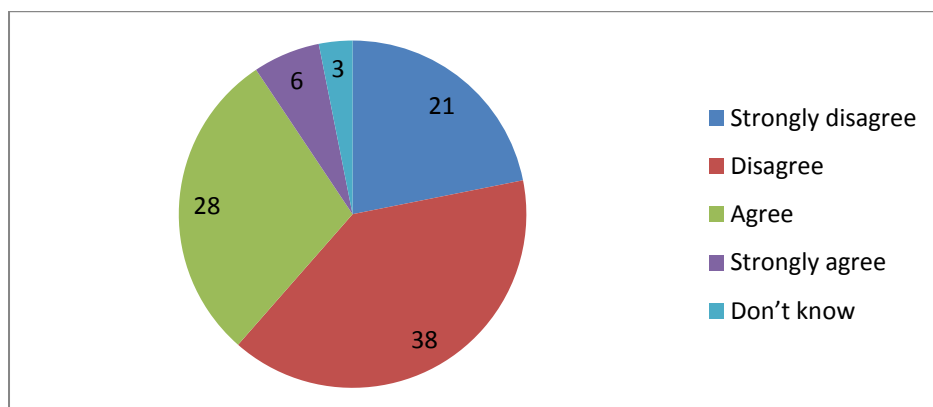
But in general project management is credited with projects moving well. This is important since major problems in project implementation means that participants get frustrated and may have to change their own plans. It diminishes the status and support of the project, which may threaten its relevance and thus its implementation. So having a 90% approval rate on this dimension is extremely positive.

**Figure 6.3: Project management has ensured that the project has progressed well**



This does not mean that projects have not faced problems. As shown in figure 6.4 below, nearly 30% felt that their project encountered problems that delayed or limited results achieved (the interviews point to delays rather than non-achievement of results). A number of these problems were not directly related to the project as such, however, but was often linked to local bureaucratic hurdles, especially regarding procurement and financial transfers of funds from the local recipient of Norwegian funds to project management. The problems appear to largely have been one-off events, however, and once a solution to a given bottleneck was found, the problem was generally solved and did not re-appear as a threat to project implementation.

**Figure 6.4: The project encountered problems that delayed/limited results achieved**

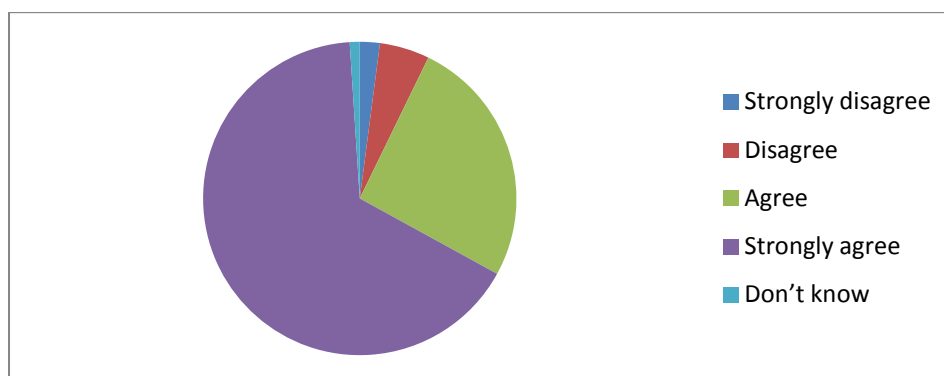


A key challenge in all projects is access to funding for the local partners. Typical complaints are that funding comes late, is difficult to access due to bureaucratic procedures, and that in the end not all promised funds are available. In the HERD program, however, over 90% Agree or Strongly agree that funding has been provided as promised and been easy to access.



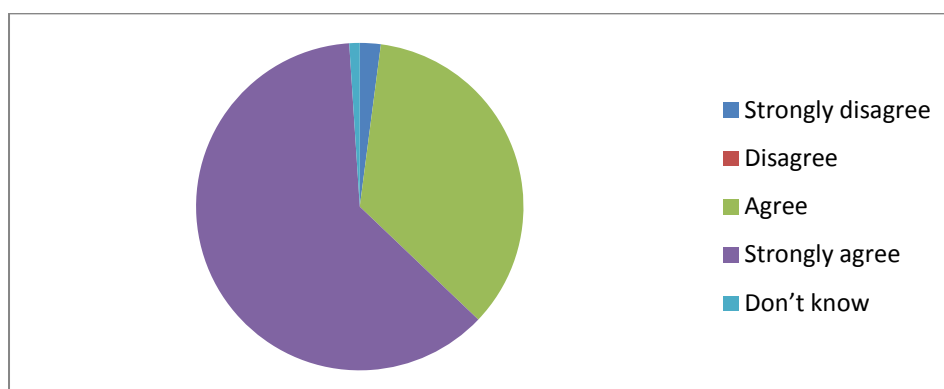
Where there have been disagreements, it has basically been due to local administrative issues, and not on the grants-making or the Norwegian partner administration side: *“Funding was provided as promised from you, but very hard for me to access because of very complicated rules in my country”* (Annex I c.8). The local issues varied. In one case, the canton – which in Bosnia is responsible for university education – required that funding be deposited with the authorities before being transferred to the university, something that delayed payments. In other places the unification of university administrations from the previous structure of fairly autonomous faculties created challenges, including a university policy of taking a percentage overhead from all project budgets. Another more general problem was compliance with public procurement regulations, which was always seen as slow, bureaucratic and not very transparent to project management. – In all cases, however, local project management noted that satisfactory solutions had been found and that basically these issues had caused some start-up delays but not seriously hampered project results.

**Figure 6.5: Funding has been provided as promised and easy to access**



Similarly, reporting requirements, both regarding financial resources and actual project deliverables, were seen as reasonable, with only 2 respondents disagreeing with this. One reason may have been that one respondent found the reporting format somewhat unclear (Annex I c.6). Almost everybody else praised the reporting format, noting that it focused on actual results and not on activity reporting, and that financial reporting was also kept to a reasonable minimum, given the need for accurate and transparent accounting.

**Figure 6.6: The reporting requirements have been reasonable**

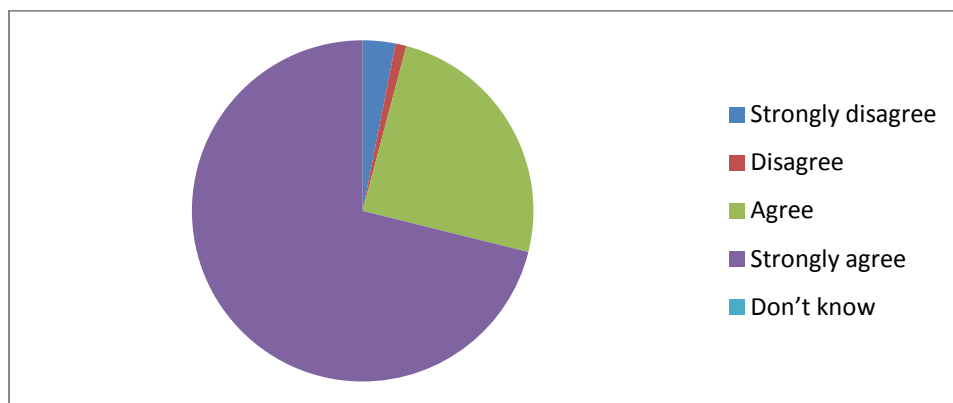


During the interviews it was the EU project reporting that was used as the counter-factual, usually with a shudder: the EU reports were seen as rigid, much too detailed, with requirements to fill in matters that were not really relevant to the project in question.

There were some issues raised, however. The ICT programme, in its first phase when it was managed by a private company, evidently had much more detailed reporting requirements. And some in the agriculture sector felt that Noragric also demanded more than NMBU itself did, something they claimed was confirmed by their Noragric counterparts.

Overall, however, just over 70% of all respondents, Norwegian and Western Balkan, said that they *Strongly agree* that the efficiency of the project has been not only Good but in fact Very Good. That is a very strong testimonial to a successful project management scheme.

**Figure 6.7: Overall, the efficiency of the project has been very good**



## 6.2 Programme Management: Sector Managers and MFA

Each of the five programme sectors has a similar structure in Norway. The institution that manages the sector has a coordinator and a secretariat that provides the administrative and financial management, and an independent Board that awards project contracts and oversees programme performance. In the case of the Development studies programme, the RCN relied on the same Board as for the NORGLOBAL programme, which is also development focused, while Aalesund and Buskerud & Vestfold UCs established new Boards just for HERD.

These structures appear to have worked well, and at least as far as the counterparts in the Western Balkans region is concerned the administrative procedures have overall worked very well. The programme and project coordinators in Norway were systematically praised for their technical knowledge, their interest and commitment to the projects and willingness to find solutions to problems as they arose. The relationships between the Norwegian project coordinators and their programme coordinator seems to have been good – no negative reactions have been received, though the review team has not had the opportunity to speak with all the project coordinators.

The links between sector coordinators and the MFA have been seen to be positive, but fairly hands-off: MFA representatives have been present at annual meetings and participated in a couple of visits to the region, but otherwise have relied on sector coordinators and secretariats to address problems arising.

While this approach has given the sectors great flexibility, in some fields this may have been too hands-off. One thing is that the review team is very surprised that the MFA has not

asked for better structured project applications and reporting as far as standard results are concerned. The Ministry has a general policy of increased focus on results, and the MFA and Norad have been clear that this should follow DAC standards, something that is quite strictly enforced when it comes to reporting by Norwegian CSOs. It is therefore surprising that the MFA has not insisted on this structure for the HERD programme. This has made for some problems for this review when trying to record actual results along the classic delivery chain (Outputs to Outcomes to Impact). The team therefore had to reconstruct from sometimes rather chatty and not so structured project applications what it was they were expected to deliver, and from this try to document what has in fact been produced (see the Project Results Sheets in Annex E). A simple Results Framework instruction at the beginning of the programme would have made life easier for a number of actors (one of the sectors noted that they had to spend a lot of money on a consultant to help them get this in place).

At this point it would also have been possible to clarify the importance the sectors should have paid to research versus capacity development and academic instruction; the importance of establishing links to industry, which requires resources and time, versus quicker institution-focused work; the extent to which the MFA is willing to consider more long-term efforts such as support to climate change adaptation in agriculture versus commodity-specific interventions. Innovation and research have different success criteria, so a discussion on how the MFA would like to see sectors balance the trade-offs could have been useful. The value chain logic – as distinct from the more abstract delivery chain – could also usefully have been discussed with all the sectors, as the relevance to industrial development and economic growth could have been made more explicit and monitorable.

Developing a set of simple templates for core programme management documents would have avoided the concerns raised that some project administrators were seen to be somewhat more demanding than others, and that the report format was not clear (though this was, in all fairness, only raised by one stakeholder).

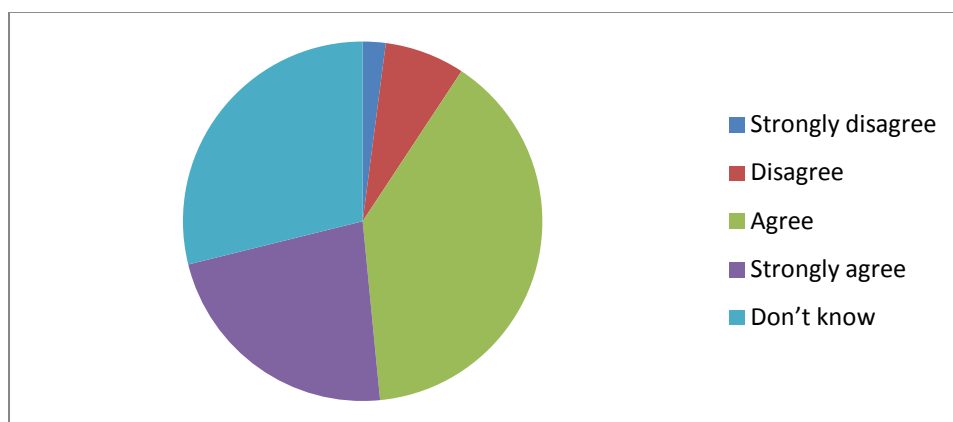
Some sector managers would also have liked more interaction between the sectors. One thing is that some of the sectors were new to the HERD programme and the region and would have liked to learn more from others. Of greater importance is perhaps that it would have allowed the MFA to raise issues about different interpretations of the HERD mandate across sectors; strengthen the focus on common objectives such as the regional collaboration as contribution to longer-term reconciliation efforts in the region; having the MFA look more critically at whether all projects were as inclusive as they could have been along various dimensions (ethnic, gender, geographic).

Another issue noted by several was the lack of involvement of the embassies in the region. A number of actors felt that having the embassies take on a greater role would be beneficial both to the projects but also to Norway. Some local actors mentioned that they were used to embassies having a promotional role early in the programme, where potential applicants could field questions and understand better what exactly the programme was looking for (there would be some problems since Norway has embassies in only 3 of the 6 states involved). It might provide the embassies with a tool in their relations with national authorities. HERD is a successful programme, but probably not very well known outside the academic community. While HERD is not likely to become a highly visible and politically important intervention, it does provide a lot of “bragging rights” due to its quite successful achievements in areas that are important in the longer run for these states’ development. The

fact that HERD is delivering concrete and positive results, that it is strengthening regional links and successfully addressing trans-border issues is something the embassies can bring attention to – but only if they are linked into the information flows.

Finally, while project management was seen as very good, about 30% of respondents were not able to answer whether the links between own project and the sector programme were clear and logical. One reason was given in one of the comments, *“It is hard to answer the question “The links between my project and the larger sector programme (Energy, ICT etc) as there is no official “larger sector strategy” in the country”* (Annex I c.14). This is perhaps misunderstanding the question somewhat, as the review team was having the links between the individual projects and the HERD sector programme in mind. But the comment is nonetheless pertinent: as long as the countries themselves do not have clear sector strategies that individual projects can link up with, it is difficult to see how the projects contribute to any larger or overarching objective/s. This again is where the MFA could provide some greater strategic clarity to all parties concerning what it believes are overarching concerns and therefore to what greater good the individual projects are expected to contribute. Today this is not clear.

**Figure 6.8:** *The links between my project and the sector programme are clear and logical*



### 6.3 Complementarity to other Funding Sources

The review team raised the question of complementary or alternative funding sources across the sectors and region during the field work, and the answer was invariably the same: the HERD programme was unique in its flexibility both regarding what it could fund and how reporting was to be done; its predictability once projects had been approved; in the equitable relations between the local partners and the Norwegian counterparts; and in the attention to looking at issues from a more integrated perspective: it was not simply academic curricula that were developed, but also the pedagogical approach to teaching it, the training in how to apply these new skills; promoting peer learning and constructive relations to industry.

The real alternative is of course EU funding, which everybody recognises is the future funding source for research-based milieus. The reason HERD is preferred has to do with how EU projects are perceived. They tend to be compartmentalised and thus do not have the multi-dimensional flexibility of HERD: the TEMPUS projects provide a lot of funding for curricula development, so that universities can upgrade their teaching materials in line with the modernisation process inherent in Bologna, but it does not fund the upgrading of

teachers' skills, does not include reflective work regarding pedagogical approaches and funding links to other actors such as business, and the scholarship programs that could upgrade MSc and PhD candidates in the new curricula are a separate programme that has its own application procedures. There is therefore no guarantee that sectors/ faculties that received TEMPUS curriculum support will also see their graduate students get scholarships to study abroad or do field work in line with the new curriculum.

The main complaint about EU funding, however, is the time cost and rigidity – of the application process, of the project format, of the reporting on results and finances. A key example of the differences often referred to had to do with project amendments. A number of HERD projects had found they needed to modify the contents or focus of the project somewhat during implementation. This could largely be handled through a conversation with the project partner, a short written statement and then a quick approval perhaps with a slight re-allocation of the budget – and this was handled internally in the project or the sector programme. With the EU, project amendments often had to go to Brussels for final approval, and both the formal requirements and the time costs were seen as extremely high.

Other funding sources were not really mentioned. There are clearly funding from some bilaterals such as Sweden and the US, but evidently not along the lines of HERD. The World Bank and EBRD credits were seldom used for strengthening research activities but more on infrastructure investments, to the extent there was any funding for tertiary education at all.

The one case mentioned regarding complementarities with another funding source was in the energy sector programme, **Rethinking architecture and energy efficiency in buildings and urban development**, where the project is establishing linkages with Germany's GIZ regarding practical implementation of some of their work (see the PRS, Annex E, for this project).

A common wish from all Western Balkans stakeholders met, is that the HERD programme continues. One thing is that the programme is supporting relevant activities and helping to build bridges across the region. But actors also fear that EU accession is becoming a marginalisation process at a time when the region still is fragmented and weak: the EU has evidently stopped talking about the Western Balkans as a region and instead talks about "the Danube region". As one professor commented, *"We wonder if they are trying to resurrect the Austro-Hungarian empire...."*. Having a programme that sees and treats the region in its own right with own needs and challenges was by a number of observers seen as critical to the Western Balkans emerging as more confident and in control of its own destiny.

## 6.4 Findings, Conclusions and Recommendations

The HERD programme is seen as *highly efficient* by both Norwegian and Western Balkan partners. This is both at project and also at sector programme levels. There were some implementation hurdles, but most of the specific ones referred to were actually in the Western Balkans region – not with the HERD projects *per se*. Funding was made available in a timely manner, it was generally easily accessible, and financial and results reporting was seen as focused on essentials and very reasonable in terms of effort required. The sectors had a Norwegian institution as manager, where a secretariat and coordinator ensured overall management and administration, and where sector-based boards approved projects and provided oversight regarding programme progress.

At the overarching programme level, the MFA granted a lot of flexibility to the sectors and probably not sufficient guidance. Clearer directions regarding a results focus with standard delivery chains would have been helpful. A facilitated dialogue between sectors regarding trade-offs between research and capacity development; innovation versus research; university-internal development versus market-related linkages and activities; the definition of the value-chain being pursued for project selection; long-term systemic issues versus shorter-term commodity-specific topics of concentration; the importance of strengthening regional links, general inclusiveness, and sensitivity to reconciliation dimensions.

The MFA might also have involved the embassies more, as a means of providing some support to projects, but also to provide embassies with a role in providing political visibility to a highly successful programme that has a value beyond the academic world.

There seemed surprisingly little complementarity to other funding sources, though all actors recognise that over time the academic community will need to rely increasingly on EU funding. For the time being, however, there was a sense that HERD provided a much more appropriate approach to the needs of Western Balkans institutions.

### Conclusions

- The overall management approach has been very good, with decentralisation, flexibility and focus on achieving results leading to efficiency and effectiveness of resource use along the *delivery/ decision/ reporting chain*: MFA ⇒ sector coordinator ⇒ project coordinator ⇒ project implementer, with high satisfaction at all steps.
- The weakest link has been MFA ⇔ sector coordination, where there has been lack of clarity regarding what the MFA really wants (academic excellence? economic development? regional reconciliation? gender equity?... ) leading to different practices across sectors (research vs. capacity development; innovation vs. research; university-internal development vs. market-related activities; etc).
- The lack of clarity extends to project selection criteria, where application forms lack simple templates for *results frameworks* (Outputs ⇒ Outcome ⇒ Impact), and, where relevant, *value chains*. A number of projects did not include Outputs and Outcomes that can be assessed against expected societal benefits, which is a major weakness when economic development and labour market relevance are stated as important.
- The current practice of non-bureaucratic project amendments should be continued to ensure adjustments to reality and thus continued high relevance.
- HERD is a university-focused programme and thus may not seem likely to provide a lot of attention outside the academic community. But HERD contains a number of dimensions and “lessons learned” relevant beyond university walls: regional collaboration, links business ⇔ research, new approaches to effective learning, gender equity, etc. There are also a number of benefits to Norway from this programme: some of the research done in the Western Balkans, for example in agriculture, is now being applied in Norway; Western Balkan students coming to Norway have shown a commitment and interest in learning that has been inspirational to the Norwegian students; a number of joint research papers have strengthened knowledge both places. Norway could publicize such benefits much better, in part through stronger involvement and clearer roles for the embassies.



- The above point shows how relevant the HERD programme in fact is, and thus how Norway can better market what is perhaps its “flagship support” to the region.

### Recommendations

- The sectors to be included in a new phase should be decided based on “most likely to have an impact” considerations as well as budget considerations: those sectors that are included should have sufficient funding to make the sector programme meaningful and with synergies possible across projects.
- Benefits to Norway should be identified and clarified, including possibilities for exploiting comparative advantages such as cost differentials for applied research, thus perhaps increasing the range of activities that the partners could share.
- The MFA should develop simple templates for project frameworks (planning) and reporting, to ensure monitoring of Outputs, Outcomes and tracking Relevance, Impact and Sustainability considerations.
- Each sector programme should contain an exit strategy so that at the end of the coming programme period the likely sustainability of results can be documented.

## Annex A: Terms of Reference

### Review of Norwegian Programmes in Higher Education, Research and Development (HERD) in the Western Balkans 2010-2015 – Case no. 15/3775

#### 1 Background

Cooperation with countries in the Western Balkans within the field of education and research has previously been initiated and financed by the Ministry of Foreign Affairs through several programmes between 2000 and 2009. The Ministry has made use of the competence of major institutions within higher education and research in Norway, including the Norwegian Research Council, the Norwegian Centre for International Cooperation in Higher Education, and the University of Life Sciences.

On the basis of the experience and evaluation of these programmes, it was decided in 2010 to launch a more comprehensive programme, HERD, which aims at contributing to economic growth and social development in the Western Balkans through cooperation in higher education and research. The main objectives of HERD are:

1. *to contribute to educating a national workforce that has adequate innovative qualifications in the maritime, agricultural, ICT and energy sectors, building in the longer-term perspective, sustainable capacity of higher education institutions in Bosnia & Herzegovina and Kosovo.*
2. *to stimulate innovation, product and process development in the maritime, agricultural, ICT and energy sectors through support to applied research and development in the Western Balkans*
3. *to provide insight into development challenges by supporting regional social science research in the Western Balkans.*

In line with the objectives above, five sector programmes were set up and, through a process of public procurement, five academic institutions were delegated the substantive as well as practical administration of the programmes:

- Maritime sector: University College of Aalesund,
- Agricultural sector: Norwegian University of Life Sciences
- ICT sector: Buskerud University College (Now Buskerud and Vestfold University College)
- Energy sector: Norwegian University of Science and Technology
- Development Studies: Norwegian Research Council.

The activities of each sector programme were governed by a common programme document and individual (but largely identical) agreements between the sector programme administrators and the Ministry. At the outset, the budgets allocated to each programme were limited to NOK 32 million but due to varying amount of activities, some ended up with larger contributions than others did. Each sector programme had its own Board where a representative from the MFA participated as an observer. The MFA has been responsible for the overall policy of HERD and has monitored HERD through annual meetings of the HERD programme Board. The initial period of the programme, 2010-2013 was prolonged to

end 2015, partly because of some late start-ups, terminated activities in Croatia because of its membership in the EU, and to allow for completion of academic degrees.

With its conclusion in 2015, the programme will be terminated with the exception of some Ph.D. is which are expected to be finalized in 2016-17. An undertaking of similar proportion and ambition is not envisaged. Options will be considered depending on the outcome of the evaluation.

## 2 Terms of reference for the review

### *2.1 Scope and Issues to be covered*

The present review shall assess the results of the programmes in relation to objectives defined in the programme documents. Emphasis shall be on concrete results both as regards projects that were launched, their contribution to scientific and business innovations and academic competence. As regards the multiple agricultural projects a review of a representative sample would suffice.

Issues to be addressed include:

- Have the projects addressed relevant needs of the cooperating academic institutions in the Western Balkans?
- Do the projects address relevant development challenges for the participating countries and their participating academic institutions in the maritime, agricultural, energy and ICT sectors?
- Do the projects promote innovation, business and employment?
- Have the Norwegian academic institutions involved in the projects contributed to the quality of the projects.
- Have synergies been obtained through cooperation with other contributors( EU-programmes, other donors, Norwegian embassies, NGOs and INGOs)
- Have projects contributed to gender equality?
- Have projects contributed to enhance participation of ethnic minorities?

### *2.2 Sustainability*

Based on these findings the review shall consider the sustainability of the projects and of future relationships between the Norwegian and local institutions involved in the programmes. It shall also assess dynamics in the relationship between education, innovation and business with a view to possible follow-up of individual projects as well as creation of new ones.

### *2.3 Effectiveness and efficiency*

The evaluation should also to the extent possible consider the effectiveness and efficiency of the programmes. A comparison of the sector programmes would be desirable in this context.

## 2.4 *Methodology and scope*

In undertaking the tasks listed above, the review shall employ the following methodology, to which they are invited to add complementary elements that might be of interest:

- Desk studies of relevant background documents, including a review of relevant host country sector strategies and activities of other donors in these sectors;
- Field visits to a selection of co-operating education and research institutions in Norway and the Western Balkans active in the programmes;
- Interviews with key project personnel in Norway as well as in the Western Balkans
- Interviews with relevant officials in governments, as well as officials with inter-governmental organisations, specifically World Bank, EBRD, European Commission delegations etc.
- Interviews with Norwegian Ministry of Foreign Affairs as well as with Norwegian Embassy staff in Serbia, Kosovo and Bosnia and Herzegovina.

The desk studies requires familiarisation with relevant agreements and correspondence between the participating education and research institutions in Norway and the Western Balkans. Annual Reports, minutes from meetings and other relevant documentation shall be provided by the sector programme administrators and the Ministry.

The field visits shall include in-depth interviews with the leadership and administrators at selected education and research institutions, the co-ordinators and organisers of projects, researchers/educationalists in Norway and the Western Balkans.

## 2.5 *Report, lessons learned and recommendations*

The final report shall cover all issues identified in the ToR and be oriented towards providing practical knowledge useful to possible future initiatives. Adjustments that the review team finds necessary and appropriate shall be communicated to and discussed with the Ministry. The report shall be written in English and include an executive summary, conclusions and recommendations. The final report shall preferably not exceed 50 pages, including the summary. The draft report shall be submitted to the Ministry before September 15, 2015. The final report must be finalised within two weeks of receiving comments on the draft submitted.

The review team will e-mail the final report to the Ministry that will forward the document to the Boards of the sector programmes.

The conclusions shall be practical in nature. They shall indicate the major strengths and weaknesses of the programmes and assess their contribution to the stated purposes and objectives. The conclusions shall seek to explain major problems and obstacles to the progress of the programmes and in light thereof discuss the realism of the purpose and objectives of the programmes defined in the Programme Documents. The relevance and appropriateness of continuing selected project activities should be assessed and reported on very concretely. The review will outline concretely potential areas where synergies between education, research, innovation and business development could be further developed.

The lessons learned should present the reviewers' impressions of the major achievements and successes together with the principal weaknesses, as well as a discussion of factors

responsible for the strengths and/or weaknesses of the programmes as they were conceived and implemented.

The recommendations should draw implications from the conclusions and suggest practical advice to the following aspects in particular:

- The selection of projects in view of potential further support, based on the choice of continuation of old projects and the support to new initiatives;
- Need for adjustments to present projects in order to optimize future activity;
- Areas of potential synergies between education, research, innovation and business development.

### 3 Organisation of the review

#### *3.1 The review team*

The team of the review shall consist of two persons, one with good knowledge of Norwegian and of Norwegian academic institutions and one with expertise on higher education and relevant institutions in the Western Balkans. The former consultant will be the team leader for the assignment.

The consultants should both preferably be experts in higher education and research as well as innovation and business development, and have knowledge of these matters in the Western Balkans.

#### *3.2 Budget and responsibilities*

#### *3.3 Timelines, reporting and outputs*

The review shall include the presentation and discussion of an inception report and a final report with an executive summary.

A total of 40 days is allocated to the review

The field work shall take place during the months of May and July 2015.

The final report shall cover all issues identified in the ToR and be oriented towards providing practical knowledge useful to possible future initiatives. Adjustments that the review team finds necessary and appropriate shall be communicated to and discussed with the Ministry. The report shall be written in English and include an executive summary, conclusions and recommendations. The final report shall preferably not exceed 50 pages, including the summary. The draft report shall be submitted to the Ministry before September 15, 2015. The final report must be finalised within two weeks of receiving comments on the draft submitted.

The review team will e-mail the final report to the Ministry that will forward the document to the Boards of the sector programmes.

## Annex B: Persons Interviewed

### Norway

#### ***Ministry of Foreign Affairs***

Ms. Annette Bull, Deputy Director, Section for South East Europe

Mr. Lars-Henrik Knutrud, Senior Adviser, Section for South East Europe

#### ***University of Life Sciences (NMBU)***

Prof. Thor S Larsen, Programme Coordinator, *Noragric*, **Agriculture**

Prof. Bishal Sitaula, Project Leader, *Noragric*, **Agriculture**

Prof. Mekjell Meland, Project Leader, *Bioforsk Ullensvang*, **Agriculture**

Mr. Bal Ram Singh, Project Leader, **Agriculture**

Mr. Peder Lombnæs, Project Leader, *Bioforsk Ås*, **Agriculture**

Mr. Dag-Ragnar Blystad, Project Leader, *Bioforsk Ås*, **Agriculture**

Dr. Mensur Vegara, Project Leader, **Agriculture**

#### ***University of Science and Technology (NTNU)***

Prof. Vojislav Novaković, Department of Energy and Process Engineering, project sector coordinator SEEWB and QIMSEE, **Energy**

Ms. Hilde Skeie, Director, Office of International Relations, **Energy**

Ms. Elisabeth Strand Vigtel, Senior Adviser, Office of International Relations, Sector Coordinator, **Energy**

#### ***University of Oslo (UiO)***

Prof. Tone Bratteteig, Department of Informatics, Chairman of the Board, **ICT**

Prof. Bjørn Stensaker, Pedagogical Institute, **Development**

#### ***University College of Aalesund (HiAa)***

Mr. Øyvind Andersen, Nautical Science, Program Coordinator, **Maritime**

Mr. Per Ekelund, Chairman of the Board, **Maritime**

Ms. Liv Møller-Christensen, Secretary of the Board, **Maritime**

#### ***University College of Buskerud and Vestfold (HBV)***

Ms. Hege Eiklid, Programme Manager, **ICT**

#### ***University College of Sør-Trøndelag (HiST)***

Mr. Robin Støckert, Assistant Professor, ICT and Audio-Visual, **Energy**

#### ***Research Council of Norway***



Ms. Inger-Ann Ulstein, NORGLOBAL Special Adviser, **Development**

Ms. Zlata Turkanović, NORGLOBAL Adviser, **Development**

**SINTEF**

Ms. Revilija Mozruaityte, Project Coordinator

**FAFO**

Dr. Åse B. Grødeland, Researcher, **Development**

**NUPI**

Prof. Iver B. Neumann, Research Professor, **Development**

**NINA**

Dr. John D. C. Linnell, Senior Research Scientist, **Development**

## **Bosnia and Herzegovina**

**Royal Norwegian Embassy**

Ms. Vibeke Lilloe, Ambassador

**University of Banja Luka**

Dr. Mihajlo Marković, Professor, Faculty of Agriculture, **Agriculture**

Dr. Branko Djurić, Professor, Faculty of Agriculture, **Agriculture**

Dr. Milanka Drinić, Associate Professor, Faculty of Agriculture, **Agriculture**

-----  
Dr. Simo Jokanović, Vice-Rector, **ICT**

Dr. Petar Marić, Professor, **ICT**

Mr. Mario Milanović, Director, University Entrepreneurship Center, **ICT**

Ms. Milena Ljubicić, Programme Manager, University Entrepreneurship Center, **ICT**

-----  
Dr. Strain Posavljak, Vice Dean for Education, Faculty of Mechanical Engineering, **Energy**

Ms. Danijela Kardas, Teaching Assistant, Faculty of Mechanical Engineering, **Energy**

**University of East Sarajevo**

Dr. Ranko Antunović, Dean, Faculty of Mechanical Engineering, **Energy**

Mr. Aleksandar Košarac, Teaching Assistant, Head of Multi-lab, **Energy**

Dr. Dajana Vujokević, Coordinator for Science and Research, Rector's Office, Office for Science, Research, Development and Investments, **Energy**

Ms. Jana Čarkadžić, Project Officer, Rector's Office, Office for Science, Research, Development and Investments, **Energy**

### ***University of Mostar***

Ms. Adrijana Majić, Associate Professor, Fac. of Agric. and Food Technology, **Agriculture**

Ms. Ana Mandić, Fac. of Agric. and Food Technology, **Agriculture**

Ms. Danijela Petrović, Professor, Fac. of Agric. and Food Technology, **Agriculture**

Ms. Zrinka Knezović, Assistant Professor, Fac. of Agric. and Food Technology, **Agriculture**

### ***University of Sarajevo***

Dr. Ejub Džaferović, Professor, Fac. of Mechanical Engineering, **Energy**

Dr. Sanda Kurtagić, Assistant Professor, Fac. of Mechanical Engineering, **Energy**

-----

Mr. Zlatan Sarić, Dean, Faculty of Agric. and Food Sciences, **Agriculture**

Mr. Hamid Custović, Professor, Fac. of Agric. and Food Science, **Agriculture**

Mr. Fuad Gasi, Professor, Fac. of Agric. and Food Science, **Agriculture**

Mr. Mirha Djikić, Associate Professor, Faculty of Agric. and Food Sciences, **Agriculture**

-----

Dr. Rada Čahtarević, Dean, Faculty of Architecture, **Energy**

Dr. Nerman Rustempašić, Vice-Dean, Academic, Faculty of Architecture, **Energy**

Dr. Dženana Bijedić, Vice-Dean, International Relations, Faculty of Architecture, **Energy**

Dr. Mladen Borazor, Assistant Professor, Faculty of Architecture, **Energy**

Mr. Senka Ibrišimbegović, Senior Teaching Assistant, Faculty of Architecture, **Energy**

Ms. Emina Alić, first year MA student, Faculty of Architecture, **Energy**

Ms. Irina Bošnjak, first year MA student, Faculty of Architecture, **Energy**

-----

Mr. Samir Muhamedagić, Regional Project Coordinator, Fac of Agric, **Maritime**

### ***University of Tuzla***

Ass. Prof. Muhamed Mehmedović, Dean, Faculty of Mechanical Engineering, **Energy**

Prof. Sead Delalić, Head, Energy Engineering Department, Faculty of Mechanical Engineering, **Energy**

Prof. Izet Alić, former Dean, Faculty of Mechanical Engineering, **Energy**

Ass. Prof. Indira Buljabašić, Faculty of Mechanical Engineering, **Energy**

### ***Independent Research Centres/ Think- tanks***

Dr. Muamer Halilbašić, Director, *Ekonomski Institut Sarajevo*, **Development**

Dr. Kenan Dautović, Associate Partner, *Centre for Security Studies, Sarajevo*, **Development**

### ***Business Innovation and Technology Park (BIT), Tuzla***

Mr. Robert Martić, Director, **ICT**

Ms. Vedrana Ajanović, Manager, **ICT**

***Innovation Centre of Banja Luka (ICBL)***

Mr. Drago Gverić, Director, **ICT**

Mr. Vladimir Ćorda, Manager, **ICT**

## **Kosovo**

***Royal Norwegian Embassy***

Mr. Jan Braathu, Ambassador

***University of Prishtina***

Mr. Hysen Bytyqi, Agriculture Faculty, **Agriculture**

Dr. Ibrahim Mehmeti, Agriculture Faculty, **Agriculture**

-----

Dr. Skender Muji, Project Coordinator, Fac of Agric, **Maritime**

***American University in Kosovo***

Ms. Blerina Halili, Research Associate, **Development**

Dr. Michael Waschak, Director of Environmental Research, **Development**

***Independent Research Centres/ Think- tanks***

Mr. Seb Bytyci, Director, *Balkan Policy Institute (IPOL), Prishtina*, **Development**

Mr. Florian Qehaja, Executive Director, *Kosovar Centre for Security Studies (KCSS), Prishtina*, **Development**

## **Montenegro**

***Ministry of Science***

H.E., Prof. Dr. Sonja Vlahović, Minister of Science, **Maritime**

***University of Montenegro***

Prof. Dr. Danilo Nikolic, Dean of the Maritime Faculty, **Maritime**

Prof. Mira Vukčević, Faculty of Metallurgy and Technology, **Energy**

***Institute of Marine Biology***

Dr. Aleksandar Joksimovic, Project Coordinator, **Maritime**

Dr. Ana Pesic, **Maritime**

***Independent Research Centres/ Think- tanks***

Mr. Nenad Koprivica, Executive Director, CEDEM - Centre for Democracy and Human Rights, **Development**

## Serbia

### ***University of Belgrade***

Prof. Nenad Zrnic, Vice Dean, Faculty of Mechanical Engineering, **Energy**

Prof. Goran Jankes, Faculty of Mechanical Engineering, **Energy**

Prof. Miroslav Stanojević, Faculty of Mechanical Engineering, **Energy**

Prof. Aleksandar M. Jovović, Faculty of Mechanical Engineering, **Energy**

Prof. Vesna Radojević, Faculty of Technology and Metallurgy, **Energy**

Prof. Marko Rakin, Faculty of Technology and Metallurgy, **Energy**

Mr. Nikola Savic, Office of the Rector, International Projects, **Energy**

Mr. Dušan Todorović, Faculty of Mechanical Engineering, **Energy**

Mr. Vuk Adžić, Faculty of Mechanical Engineering, **Energy**

-----

Prof. Slaven Prodanović, Vice Dean, Faculty of Agriculture, **Agriculture**

Dr. Mila Savić, Professor, Faculty of Agriculture, **Agriculture**

Dr. Savo Vucković, Professor, Faculty of Agriculture, **Agriculture**

-----

Ass Prof. Maja Kovačević, Faculty of Political Science, **Development**

### ***University of Nis***

Dr. Goran T Đorđević, Assistant Professor, Faculty of Electronic Engineering, **ICT**

### ***University of Novi Sad***

Prof Branko Ćupina, Vice Dean for Science and International Cooperation, Faculty of Agriculture, **Agriculture**

Dr. Maja Manojlović, Professor, Faculty of Agriculture, **Agriculture**

Mr. Đorđe Krstić, Assistant Professor, Faculty of Agriculture, **Agriculture**

Ms. Klara Marijanušić, Teaching Assistant Faculty of Agriculture, **Agriculture**

Mr. Ranko Ćabilovski, Teaching Assistant, Faculty of Agriculture, **Agriculture**

### ***Independent Research Centres/ Think- tanks***

Ms. Sonja Stojanović Gajić, Director, *Belgrade Centre for Security Policy*, **Development**

Ms. Ivana Zivadinović, Junior Researcher, *Centre for Education Policy*, **Development**

Prof. Đuro Kutlača, Head of Centre, Scientific Counselor, *Mihailo Pupin Institute*, **Development**

Dr. Dušica Semenčenko, Scientific Associate, *Mihailo Pupin Institute*, **Development**

## Annex C: Documents Consulted

### General HERD Documents

Document Title	Document type
Programme in Higher Education, Research and Development (HERD) in the Western Balkans 2010 – 2013	Programme Document
Programme in Higher Education, Research and Development (HERD) in the Western Balkans 2010 – 2014	Revised Programme Document
Annual meeting of WB section/MFA with HERD programme managers	Minutes

### Agriculture Sector Documents

Project/Document Title	Document type
Agricultural Adaptation to Climate Change - Networking, Education, Research and Extension in the WB	Application
	Status and progress report 2014
Antioxidant activity and stability of bioactive components during processing of certain raw materials of plant origin in BiH	Application
Comparison of lamb carcass and meat quality of breeds in WB and Norway achieving palatability, sale and sustainability (LAMBCAMEQU)	Application
	Presentation
Dev. of education and transfer of knowledge in the area of food technology - EDUFOOD	Application
	Presentation
Evaluation of cattle welfare and housing in BiH and establishing a research/extension group in animal housing, welfare and behaviour	Application
Evaluation of fruit genetic resources in BiH with the aim of sustainable, commercial utilization	Application
	Status and progress report 2014
	Presentation
	Presentation
	Presentation
Grassland management for high forage yield and quality in the WB	Application
	Presentation
Manufacture of traditional BiH cheeses with selected indigenous bacterial cultures and technological parameters as basis for industrial production	Application
	Presentation
Mineral improved food and feed crops for human and animal health	Application
	Status and progress report 2014
	Status and progress report 2013
	Presentation

Providing genetic diversity and healthy plants for the horticulture in BiH	Application
	Presentation
Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing	Application
	Status and progress report 2014
	Status and progress report 2013
	Status and progress report 2012
	Work plans for 2012,2013 and 2013
Study of the Microbiological flora of milk and dairy products in Kosovo	Application
The use of natural zeolite (clinoptilolite) for the treatment of farm slurry and as a fertilizer carrier	Application
	Presentation
HERD Agriculture: Report to MFA (15.2.2012).	Report
HERD Agriculture: Report to MFA (6.3.2013).	Report
HERD Agriculture: Report to MFA (11.4.2014).	Report
HERD Agriculture: Report to MFA (22.4.2015).	Report
Projects under HERD/Agriculture that have received grant	List of projects
Minutes of meeting from the Board; 2010: 28.08,24.09,15.10,23.11. 2011: 25.01,25.08. 2012: 03.05,22.11,19.12.	Min of meetings
Project reporting to the Board 2014	Report
Project reporting to the Board 2013	Report
Conference and project visits in BiH 30.09 - 5.10 2013 - Internal mid-term review	
Assessment of project reporting 2013	Report

### Energy Sector Documents

Project/Document Title	Document type
5th Call for applications - HERD/Energy 2010-2016	Call
Guidelines for Applicants - HERD/Energy 2010-2016	Guidelines
Agreement between MFA and NTNU regarding the administration of HERD/Energy	Agreement
HERD/Energy Project Protocol	List of projects
Report on status of HERD/Energy	Report to MFA
Applications for HERD / Energy 2010-2013: Overview of applications received under the 1st call	Evaluation of applications received
Applications for HERD / Energy 2010-2015: Overview of applications received under the 4th call	Evaluation of applications received



NORMAK Energy - Norway - Macedonia Albania Kosovo Energy Development at Academia	Application
	Detailed Budget
	Reply to the application
Rethinking architecture and energy efficiency in buildings and urban development	Application
	Reply to the application
SEEB - Sustainable and Energy Efficient Buildings	Application
SEEWB - Sustainable Energy and Environment in the Western Balkans	Application
	Annual Summary Report 2011
	Annual Progress Report 2012
	Annual Summary Report 2012
	Annual Progress Report 2013
	Annual Summary Report 2013
	Final Summary Report 2011-14
QIMSEE - Quality Improvement of Master programs in Sustainable Energy and Environment	Application
	Reply to the application

### ICT Sector Documents

Project/Document Title	Document type
Project NORBAS	Progress report for 2014
	Summary for 2012
Bosnian-Norwegian research based innovation for development of new, environ. Friendly, competitive robot technology - BANOROB	Progress report 2012 and Activity report for Q1 2013
NORBOTECH - Norwegian-Bosnian Technology	Project Report 2012
HERD/ICT 2010-2014	Ppt - report
HERD/ICT 2010-2014	Ppt - report

### Maritime Sector Documents

Project/Document Title	Document type
University of Montenegro, Maritime faculty - Kotor	Presentation
SEAMED - Strengthening education, applied research and marine development in WB	Project memo
	Application for additional funding
	Final Report 2015

	Financial Report 2014
	Progress report 2012
	Progress report 2013
	Report from workshop and excursion
	Ppt from summing-up meeting
	Contract Aalesund UC - SINTEF
	Application
Montenegro Sustainable Maritime Competence Development Initiative	Progress report 2014
	Progress Report 2013
	Contract Aalesund UC
	Application
Albania Sustainable Maritime Competence Development Initiative	Progress Report 2014
	Supplement to report from Vlore 2014
	Contract Aalesund UC
	Application
HERD Maritime financial report 2012: Expenditures, balances and budget	Financial Report 2012
HERD Maritime financial report 2013: Expenditures, balances and budget	Financial Report 2013
Minutes from the Board meetings 2010-2014	Minutes
Overview of the Board meetings	List of the meetings
HERD Maritime phone meeting with Board representatives	Minutes
HERD Maritime phone meeting with Board representatives	Minutes
HERD Maritime phone meeting with Board representatives	Minutes

### Development Studies Sector Documents

Project/Document Title	Document type
NORGLOBAL Projects	List of supported projects
Utløsningsmal	Call for proposal
Agreement between MFA and The Research Council Norway regarding the administration of "Programme in Higher Education, Research and Development in the Western Balkans 2010-2013 The Development studies Sector (HERD/Development studies)"	Programme document
W-Balkan applications	Project applications
Report from project visit to Western Balkan 2012	NORGLOBAL report from mid-term project visit

WBC – Final reports	Final reports of individual projects
Report to the Ministry of Foreign Affairs on HERD-Development Studies	Final report
List of projects and partners	List
W-Balkan Project Catalogue	List of projects
NORGLOBAL Work Programme 2009-2013	Work programme
Minutes from NORGLOBAL programme board meetings	Minutes from 3 board meetings
Annual Report NORGLOBAL 2010, 2012, 2013	Annual reports
Corruption in the Western Balkan countries	Project presentation
Innovation policy learning from Norway in Western Balkans	Project presentation
Nation-building in the Western Balkan countries	Project presentation
Research and education in the Western Balkan countries	Project presentation
Rural development in the Western Balkan countries	Project presentation
Security policy in the Western Balkan countries	Project presentation
Security Transitions in the WB: Compiled project evaluations	Internal project evaluation

## Annex D: Programme Structure

The table below shows all the approved projects in each of the five sectors. Those projects reviewed by the team and reviewed during the field work are highlighted in green, and the partnering institutions visited highlighted in orange (**to be done**)

**Table D.1: The HERD Programme by sector and local partner/s**

<b>HERD – Agriculture: Norwegian University of Life Sciences</b>		
Mineral improved food and feed crops for human and animal health	University of Sarajevo	Bosnia
	University of Mostar	Bosnia
	University of Banja Luka	Bosnia
	University of Novi Sad	Serbia
	University of Osijek	Croatia
	University of Prishtina	Kosovo
The use of natural zeolite for the treatment of farm slurry and as a fertilizer carrier	University of Belgrade	Serbia
	University of Sarajevo	Bosnia
Manufacture of traditional cheeses ...	University of Sarajevo	Bosnia
Study of the microbiological flora of milk ..	University of Prishtina	Kosovo
Comparison of lamb carcasses and meat quality of breeds in W Balkans and Norway	University of Banja Luka	Bosnia
	University of Montenegro	Montenegro
	University of Skopje	Macedonia
Grassland management for high forage yield and quality in W Balkans	University of Banja Luka	Bosnia
	University of Novi Sad	Serbia
	University of Prishtina	Kosovo
Providing genetic diversity and healthy plants ...	Several universities, Mostar	Bosnia
Evaluation of fruit genetic resources ...	University of Sarajevo	Bosnia
Development of education and transfer of knowledge in the area of food technology	University of Tuzla	Bosnia
	University of Novi Sad	Serbia
Cattle welfare and housing	University of Banja Luka	Bosnia
Antioxidant activity and stability of bioactive compounds ...	University of Sarajevo	Bosnia
Agricultural adaptation to climate change ...	University of Sarajevo	Bosnia
	University of Banja Luka	Bosnia
	University of Novi Sad	Serbia
	University of Belgrade	Serbia
Research, education and knowledge transfer promoting entrepreneurship in sustainable use ...	University of Mostar	Bosnia
	University of Banja Luka	Bosnia
	University of Belgrade	Serbia
<b>HERD – Energy: NTNU</b>		
NORMAK - Norway-Macedonia-Albania-Kosovo sustainable energy ...	University of Prishtina	Kosovo
	Polytechnic U of Tirana	Albania
	South East European U.	Macedonia
QIMSEE – Quality improvement of Master's programmes in sustainable energy and environment	University of Banja Luka	Bosnia
	University of Sarajevo	Bosnia
	University of Belgrade	Serbia
	University of East Sarajevo	Bosnia

	University of Tuzla	Bosnia
	University of Montenegro	Montenegro
	U. of Ss Cyril and Methodius	Macedonia
Rethinking architecture and energy efficiency in buildings...	University of Sarajevo	Bosnia
SEEB - Sustainable and energy efficient buildings	ESLG, Prishtina	Kosovo
SEEWB – Sustainable energy and environment in the Western Balkans	University of Belgrade	Serbia
	University of Zagreb	Croatia
	University of East Sarajevo	Bosnia
	University of Tuzla	Bosnia
	University of Sarajevo	Bosnia
<b>HERD – Maritime: University College of Aalesund</b>		
Strengthening education, applied research and marine development in W Balkans	University of Sarajevo	Bosnia
	University of Prishtina	Kosovo
	University of Tirana	Albania
	Inst Marine Biology, Kotor	Montenegro
Albanian maritime international competitiveness initiative	U. "Ismael Qemali"	Albania
Montenegro sustainable maritime competence development initiative	U Montenegro, Maritime Faculty	Montenegro
<b>HERD – ICT: Vestfold and Buskerud University College</b>		
AEP - Academic Exchange for Progress	University of Tirana	Albania
	South East European U	Macedonia
	University of Prishtina	Kosovo
	University for Business and Technology, Prishtina	Kosovo
	STIKK – 65 ICT org/firms	Kosovo
	Crimson	Macedonia
	AITA – 42 ICT orgs/firms	Albania
BANOROB – Bosnia-Norway research for environment ...	Inno Centre Banja Luka	Bosnia
	University Banja Luka	Bosnia
IPM – Integrated Pest Management in Bosnia's agricultural sector	University of Mostar	Bosnia
	University of Sarajevo	Bosnia
	University of Banja Luka	Bosnia
NORBAS – Norwegian-Bosnian-Serbian cooperation for university and industry ICT R&D	University of Banja Luka	Bosnia
	University of Nis	Serbia
NORBOTECH – Norwegian-Bosnian technology transfer	University of Banja Luka	Bosnia
	University of Tuzla	Bosnia
<b>HERD – Development Studies: Research Council of Norway</b>		
European integration in higher education and research in Western Balkans	Ctr Ed'tion Policy, Belgrade	Serbia
	University of Belgrade	Serbia
	University of Zagreb	Croatia
Innovation policy – learning from Norway	Econ Inst, Sarajevo	Bosnia
	Mihajlo Pupin Inst, Belgrade	Serbia
	Inst of Economics, Zagreb	Croatia
	U. St Kliment, Skopje	Macedonia
Legal culture and anti-corruption reform	Balkan Policy Inst, Prishtina	Kosovo
	ARGUMENT, Belgrade	Serbia

	Pro Media, Skopje	Macedonia
Security transitions in Western Balkans	Analytica, Skopje	Macedonia
	Belgrade Centre for Security Policy	Serbia
	CEDEM, Podgorica	Montenegro
	Institute for Democracy and Mediation	Albania
	Kosovar Centre for Security Studies	Kosovo
	Ctr Security Studies, Sarajevo	Bosnia
	Inst Int'l Relations, Zagreb	Croatia
Strategies of symbolic nation building	University of Rijeka	Croatia
	Ctr Policy Studies, Zagreb	Croatia
Role of natural resources in sustainable rural development	American University, Kosovo	Kosovo
	Macedonian Ecological Soc'y	Macedonia
	University of Zagreb	Croatia
	PPNEA, Tirana	Albania



## Annex E: Project Results Sheets

### Programme Area: **Agriculture**

Project title: Mineral improved food and feed crops for human and animal health

Norwegian project coordinator: NMBU Norwegian University of Life Sciences

Other Norwegian partner/s: Department of Plant and Environmental Sciences, NMBU, and National Veterinary Institute (NVI)

Western Balkan partner/s (country, institution, name/title):

- BiH, Faculty of Agriculture and Food Science University of Sarajevo,
- BiH, Faculty of Agriculture and Food Technology University of Mostar,
- BiH Faculty of Agriculture University of Banja Luka,
- Serbia, Faculty of Agriculture University of Novi Sad,
- Croatia, Faculty of Agriculture University of Osijek,
- Kosovo, Faculty of Agriculture and Veterinary University of Pristhina.

Budget: Total NOK 5,504,000 / NOK 4,704,000 HERD funding, NOK 800,000 own funding

January 2011 / November 2015 :

Documents seen:

- Application
- HERD AG secretariat report to the board of 2013 and 2014
- Status and progress report 2013 and 2014
- Presentation

Results framework:

Planned Results	Results produced
<p><b>Impact, if any:</b></p> <p>Contribute in production of safe high-quality food and feed that reflects importance of right mineral content in food and feed.</p>	<p>3 wheat varieties widely used in Serbia and Croatia for bread making, accumulated both selenium and zinc in amounts considered enough to meet human dietary requirement and hence are recommended</p>
<p><b>Outcome/s:</b></p> <p>Strengthened institutional collaboration and to build Competence of staff and students of Balkan universities on mineral improved crop production for better health through institutional collaboration and to enhance the research based component.</p>	<p>Improvement in cooperation with faculties in WB region, and scientific and personal cooperation with NMBU strengthened.</p> <p>Collaboration U Novi Sad resulted in one ongoing IPA project "Agricultural Contribution Towards Clean Environment and Healthy Food". Second IPA project application made with U Mostar. Joint workshops of two HERD projects each year has contributed to good cooperation among scientists.</p>
<p><b>Output 1:</b></p> <p>Staff capacities of WB universities strengthened through capacity building and technology transfer.</p>	<p>A multidisciplinary approach with scientists and technicians from crop production, animal nutrition and feed, soil fertility, analytical laboratory from all WB Universities resulted in complementary research.</p> <p>Important improvement in developing cooperation with faculties in Balkan countries, and very useful scientific and personal cooperation with UMB has been observed.</p> <p>Connection with Novi Sad has resulted in one</p>

	<p>ongoing IPA project "Agricultural Contribution Towards Clean Environment and Healthy Food". Second IPA project application is made in cooperation with Mostar.</p> <p>One research NMBU, University of Sarajevo, Faculty of Medicine/ Osijek and Dep't of Biology/ Osijek using bio-fortified wheat and maize for livestock feeding, impact on animal physiology and health, bio-fortification impact on plant physiology.</p> <p>7 scientific publications, 11 seminar papers</p>
<p><b>Output 2:</b></p> <p>3 MSc and 1 PhD students each from universities of Sarajevo, Banja Luka, Prishtina, Osijek supported in finalizing their theses by project</p>	<ul style="list-style-type: none"> <li>• Over 15 MSc students, 4 PhD students supported</li> <li>• So far 10 BSc and MScs theses completed</li> <li>• 2 PhD theses in process, to be completed 2016.</li> </ul>
<p><b>Output 3:</b></p> <p>Staff exchange to Norway or between the WB universities of one month's duration. Planning: 3 from Kosovo and 3 from BiH. 1 from Serbia and 1 from Croatia</p> <p>Planned training of 7 scientific staff and 6 technicians to build capacity of these institutions.</p>	<ul style="list-style-type: none"> <li>• 9 scientists from 5 participating WB universities one to two weeks visits to UMB and BIOFORSK</li> <li>• Gender: of 6 country coordinators in WB, 4 are women. In the project staff at all universities except Kosovo, there is a good representation of women. Among the scientists visiting UMB/BIOFORSK in 2013 50% were women.</li> </ul>
<p><b>Output 4.</b></p> <p>Two seminars/ workshops planned in addition to participation in Cost Action FA0905.</p>	<p>Close cooperation with 2 other HERD projects: 1) Grassland management for high forage yield ... and 2) Agricultural adaptation to Climate change.</p> <p>Joint workshop with "Grassland..." The joint workshop of the two Herd- projects every year has contributed to good cooperation among scientists of different disciplines and universities.</p> <p>PhD. Students, participated in the Short Scientific Mission (STSM) of the Cost Action FA0905 at Rothamsted, UK and Sabanci University, Turkey.</p>

**Programme Area: Agriculture**
**Project title: Manufacture of Traditional B&H Cheeses with Selected Indigenous Bacterial Cultures**

Norwegian project coordinator: NMBU/ department of chemistry, Biotechnology and food science IKBM.

Other Norwegian partner/s: no

Western Balkan partner/s (country, institution, name/title): BiH, Sarajevo, Faculty of Agriculture and Food Sciences.

Budget: NOK 2.135.000 / Granted 1.935.000

Begin / End dates: Started in 2011 (practical work began in 2010, before funding)/2015 (December)

Documents seen:

- project application,
- Report from the HERD/ Agriculture secretariat to the board for 2013 and 2014,
- PP-Presentation
- Status and progress report 2014

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b> A standardized production of traditional cheese in BiH has been created that will make it possible for farmers to profitably produce traditional cheeses	
<b>Outcome/s:</b> 1. Identified production parameters for production so production of cheese on the farm can continue.	Natural/ indigenous bacteria in two traditional cheeses have been identified and characterised in the Lab, but are not ready for distribution to farmers or dairy industry.
2. Improved capacity for analyses and lab work related to dairy products	Necessary and adequate Lab equipment has been installed and training conducted
3. Biodiversity / traditional bacteria cultures saved	Natural/ indigenous bacteria have been identified and analysed.
4. Cooperation and interrelationship between partner organisation strengthened	Study visit to Norway, exchange of knowledge have been conducted and good relations established
<b>Output 1:</b> Isolation, identification and characterisation of natural bacteria flora	The bacteria culture based on indigenous bacteria has been isolated. 2100 isolates/3000 bacteria identified. Three new microorganisms in Ljivo cheese have been identified.
<b>Output 2:</b> Experimental cheese production	Pilot cheese production has been conducted both in BiH and Norway using selected identified natural indigenous bacteria flora.
<b>Output 3:</b> A continued and improved cooperation between Norway and WB/ BiH on institutional level	Improved capacity for analyses and lab work related to dairy product. PHD students doing field work in Norway. Bacteria cultures were sent to Norway for more detailed analyses. BiH bacteria

	<p>culture is tested in cheese production based on Norwegian milk. 2 PhD dissertations and 8 MSc theses will be produced within the project frame.</p> <p>Fully balanced gender representation in the project.</p>
<p><b>Output 4:</b></p> <p>Push and stimulate governmental bodies to take on the responsibility for improvement of research, analysis, and process improvements.</p>	<p>Governmental institutions are so far not interested in strengthening knowledge or production in the field of dairy products or traditional bacteria cultures.</p>
<p><b>Output 5:</b></p> <p>Sustainable and environmental production in rural area</p>	<p>No production in rural area based on the identified culture so far. Bacteria culture have been used only for test production</p>
<p><b>Output 6:</b></p> <p>Strengthened capacity of local institutions.</p>	<p>2 PhD students in the project, doing part of the study in Norway have increased knowledge related to analysis, Sarajevo – Kosovo: good cooperation with project under HERD AG in Kosovo, sending samples to them and also make LAB analysis from Kosovo.</p> <p>4 publications have been published.</p>

**Programme Area: Agriculture**

Project title: **Study of the Microbiological flora of milk and dairy products in Kosovo with emphasis on pathogenic bacteria and lactic acid bacteria"**

Norwegian project coordinator: NMBU/ Department of Chemistry, Biotechnology and Food Science

Western Balkan partner/s: University of Pristhina, Agricultural Faculty and Veterinary.

Budget: NOK 2.174.000

Begin – end dates: December 2011 - December 2015.

Documents seen:

- Project Application
- MoM from Board meetings in HERD – Agriculture

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b> The microbial quality of milk and milk products established according to EU regulations.	
<b>Outcome/s:</b> Identified a lacto coccus garvieae isolate that produces a potent antimicrobial peptide that might be used to fight pathogenic bacteria	The antimicrobial peptide is now under consideration for patenting. <b>The peptide</b> will kill or prevent growth of pathogenic bacteria for the use in veterinary or human medicine.
<b>Output 1:</b> Data from milk and dairy producers in Kosovo collected to identify microflora in milk.	Samples collected from 230 farms from all Kosovo, 10 municipalities, each controlled 3 times, 93% with bad quality. Sampled also from bulk tank milk, 2- 20 cows
<b>Output 2:</b> Determine contamination of Staphylococcus aureus, Listeria monocytogenes, and Lactococcus garvieaea in raw milk and cheeses.	5000 bacteria sent to Norway for analysis, 100 for further studies. About 1500 were sequenced with respect to 16SRNA DNA for final identification, deposited in a microbial strain bank in Kosovo.  Exposed widespread contamination in raw milk with respect antibiotic resistance staphylococci included MRSA. The presence of Lactococcus garvieae, a potential human pathogen, was found with high frequency in raw milk but not in cheeses.
<b>Output 3:</b> Diversity of lactic acid bacteria (LAB) in milk and selected dairy products has been established	The project has cooperated with female farmers, taken samples from their farms and analysed milk and dairy products (cheeses, whey etc). Results have been sent back to the farmers, discussed. Workshop held with 80 persons, dairy farmers
<b>Output 4:</b> Development of study module in basic and advanced microbiological and for microbiology hygiene and microbial analysis methods in Pristina.	A booklet in microbiological hygiene guidelines and LAB- starter cultures intended for the students, dairy workers, Vets on how to work in with dairy production and product, is under way.

<p><b>Output 5:</b></p> <p>Study visit, staff exchange, students, PhDs, publications,</p>	<p>Articles published in Food Control Journal, another articles submitted on Veterinary Microbiology Journal.</p> <p>One articles ready for Journal of Food Safety while two others articles are ready but cannot be published due to the process of patenting bacteria</p> <p>Altogether 11 male and 8 female students included in the project, 2 PhD students finished and one under way, 9 MSc and 6 BSc theses prepared, 2 more MSc and 5 BSc being prepared</p>
<p><b>Output 6:</b></p> <p>Appropriate laboratory infrastructure installed and in use</p>	<p>A laboratory for molecular / DNA work for microbiology has been set up. Equipment for DNA analysis and bacterial growth has been purchased and is now in use by students and researchers at the University of Prishtina</p>



Programme Area: **Agriculture**

Project title: **Grassland management for high forage yield and quality in the Western Balkans**

Norwegian project coordinator: BIOFORSK

Other Norwegian partner/s: NMBU/ IMV

Western Balkan partner/s (country, institution, name/title):

- BiH, Banja Luka, The Faculty of Agriculture, University of Banja Luka
- Kosovo, Pristina The Faculty of Agriculture and Veterinary in Prishtina
- Serbia, The Faculty of Agriculture, University of Novi Sad

Budget 3.522.575 / : Granted kr. 3.247.575

Begin and End dates: 01/01/2012-31/12/2015

Documents seen:

Project application, Status and progress report 2014, Status and progress report 2014 from Pristina and from Banja Luka, Report from project visit to Western Balkan 2012, presentation, MoM from the board of HERD Agriculture.

Results framework:

Planned Results	Results produced (activities undertaken)
<b>Impact, if any:</b> To build capacity and competence of academic institutions through cooperation in the area of education training research, focusing on innovation and improvement of grassland management.	
<b>Outcome/s:</b> 1 Capacity building in Balkan academic institutions.	Synergies between projects and institutions in Novi Sad, Pristina and Banja Luka.
2 Mapping/ inventarisation of the current situation on grassland management for identifying area for improvement	Field work conducted and data collected.
3 Identified how yield and the quality of the yield respond to seed composition, fertilisation practices etc.	Chemical analysis of samples collected from field experiments.
4 Economical evaluation of cost/benefit analysis for different strategies for grassland management.	In process
5 New innovative solutions and research finding for improved grassland management transferred.	Joint project works shops, Joint research and scientific publications
<b>Output 1:</b> Institutional development and competence building obtained through development of study modules, curriculum development and teaching methodology.	Institutional development and competence building has been obtained through Capacity building in the field of grassland management, joint research study visits training of young researches and scientific publications. Supervision of three students from Novi Sad and Banja Luka

<b>Output 2:</b> Field work structured and implemented	Two types of field experiments have been conducted: 1) fertilisation field experiment and 2) legumes and grass mixtures.
<b>Output 3:</b> Study visits/ exchange of staff, <i>MSc and PhD</i>	Regression analysis in NMBU: 1 PhD stud.(f) Analysis of soil and plant NMBU: 1 PhD stud (f) and 1 MSc stud (m). Total: 4 MSc from Banja Luka (2f, 2m), 3 MSc from Pristina (m) and 1 PhD from Novi Sad worked on project subjects (f). Additional 1 PhD stud (m), 1 MSc (f?) and 2 BSc (m) stud. in Novi sad was locally involved in field experiments.
<b>Output 4:</b> Developed material for extension service and workshops for extension officers and researchers.	Articles in popular magazines. Book within grassland management. Contributions to workshops/seminars.
<b>Output 5:</b> Publications, joint research, cost benefit analysis,	Joint publications with the project "Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing" Cooperation with the HERD-project and institutions under: " Mineral improved food and feed crops for human and animal health". Joint research studies between the involved universities in Novi Sad, Pristina and Banja Luka. A total of 11 scientific articles published.

**Programme Area: Agriculture**

Project title: Providing genetic diversity and healthy plants for horticulture in BiH

Norwegian project coordinator: **Norwegian Institute for Agricultural and Environmental Research – as of 1 July 2015: NIBIO – Norwegian Institute of Bioeconomy Research**

Other Norwegian partner/s: Norwegian Genetic Resource centre, Sagaplant

Western Balkan partner/s (country, institution, name/title):

- Bosnia and Hercegovina, University of Mostar Faculty of Agriculture and Food Technology,
- BiH, Mostar, University "Džemal Bijedić", Agromediterranean Faculty,
- Other cooperating partners: Institute for genetic engineering and biotechnology in Sarajevo, Biotechnological Faculty at university in Bihac, Fac. Of agriculture in Banja Luka, Plantation Visici in Capljina, Fac. Of Agriculture at University of Zagreb.

Budget / Granted: 2 811 000 NOK

Begin 02.2011 / End dates 10.2015

Documents seen: Project application, status and progress report 2014, PP- Presentation, Program related documents like MoM from HERD Agriculture board meetings and Project reporting from the secretariat to the Board.

**Results framework:**

Planned Results	Results produced (Activities undertaken)
<b>Impact, if any:</b> Secure production of plants and of indigenous varieties and genotypes of horticultural crops that can be transformed into applicable plant material for further development of horticulture in BiH.	
<b>Outcome/s:</b> Improved production of horticulture plants and goods in the southern part of BiH. A base for further research and development that will enhance local, commercial production based on healthy plant material from valuable local plant cultivars is in place. Good cooperation with local businesses is established.	-  -
<b>Output 1*:</b> Practical work in the laboratory and in the field is in place.	One laboratory has been equipped and staff trained, for virus testing (ELISA and PCR-testing) and food analysis.
<b>Output 2:</b> Preservation of biodiversity is in place and genetic identification of grapevine and some fruit crops are in place.	30 autochthonous varieties have been collected Varieties at the field are collected by the Faculty of Agriculture and will be used as a gene bank and for experiments and research
<b>Output 3:</b> Skills and capacities are developed among staff and students at the institutes involved	Exchange and cooperation between partners institutions have taken place through staff exchanges between WB institutions and Norway. Workshop for networking and exchange of results

	and research has been held. Monograph <b><i>Atlas of viticulture and wine in BiH</i></b> published as the first of its kind in BiH.
<b>Output 4:</b> Connection between research sector and business partners and governmental authorities has been established.	Master students have made experiments and analysis for the aim of producing new wines from the collected, old varieties Chemical and nutritive analysis of some fruits varieties conducted. Will be a base for new marketable products.
<b>Output 5:</b> Fellowship grants to PhD and Master students, on different levels	11 Master Students 9 PhD students Of these students were 16 females and 4 males.

**Programme Area: Agriculture**

**Project title: Evaluation of fruit genetic resources in Bosnia – Hercegovina with the aim of sustainable, commercial utilization.**

Norwegian project coordinator: Bioforsk, Ullensvang.

Western Balkan partner/s (country, institution, name/title): Bosnia-Hercegovina, Faculty of agriculture and food science in Sarajevo (FAFS). (Also some cooperation with Fac. Of Agriculture, University of Zagreb and Agromediterranean Faculty, Mostar and Faculty of Agriculture and Food Technology, University of Mostar).

Budget: Approved by the board: 2 658 000, Expenditures (to date): NOK 2658 000

Begin / End dates: April 2011 – Dec. 2014

Documents seen:

- Application and presentations,
- Status and progress report 2014
- Summary from the AG-Secretariat to the board for 2013 and 2014
- Report to the board 05.09.2014 – continuation,
- Minutes from board meetings in HERD/Agriculture

Results framework:

Planned Results	Results produced (activities undertaken)
<b>Impact, if any:</b> Sustainable conservation through utilisation of autochthonous fruits in BiH	
<b>Outcome/s:</b> Strengthened institutional collaboration and scientific research at the fac of AG end Food in Sarajevo, and the institutes competitiveness in the area of research and education of young professors and researchers, Assess genetic diversity and relationship of autochthonous cultivars in BiH that will stimulate the use of them in local food industry, combined also with rural tourism.	Cooperation between Bioforsk and Univ. in Sarajevo has continued where they have submitted 3 joint applications where 2 have been approved. Scientific articles have been published, many co-authored jointly by Norwegian and BiH researches. Local food industry started using local fruit identified under this project in jam and juices + distillates, but production stopped due to damage on production units by the flood in
<b>Output 1:</b> Genetic diversity and relationships of autochthonous cultivars of Apple, pear and plum has been assessed	Done
<b>Output 2:</b> Commercial and agronomic traits of the fruit groups has been analysed, evaluated and collected in a database for further breeding program,.	Done
<b>Output 3:</b> Identified and evaluated sensory characteristics and characteristics that are important for the food and juice processing industry from the collected fruits.	Done

<p><b>Output 4:</b></p> <p>Collected data is available for local food processing industry and small and medium food businesses have developed niche products based on local fruit which makes them more competitive on the domestic market.</p>	<p>Due to the flood in 2014 the distillates and jam production buildings for their business partner were hit by the flood.</p> <p>Industry seeks advisory from the university and the Univ. has given advises for which Cultivars that is recommendable in production and has also developed guideline for production.</p>
<p><b>Output 5:</b></p> <p>Shorter (2 weeks) and longer (6 months) study visit to Norway conducted and new teaching methodologies are learnt</p>	<p>The PhD students Adnan Alihodzic (2013) and Amilla Vranac (2014) attended a 1 month course in HPLC analysis at Ås, Norway and transferred their experiences to the staff in FAFS in Sarajevo. In addition Adnan Alihodzic attended a course about sensoric analysis at Ås</p>
<p><b>Output 6:</b></p> <p>Stimulated and strengthened cooperation between Fac. Of agriculture and food sciences in Sarajevo and Bioforsk,</p> <p>2 scholarship for PHD stud is provided,</p> <p>Improved staff and student mobility.</p>	<p>-4 PhD students ** (2F/2M) are involved in the project. One has defended her thesis spring 2015, Expected the other three to defend final thesis by end 2015/ beg 2016.</p> <ul style="list-style-type: none"> <li>- 5 BSc thesis defended,</li> <li>- 17 MSc thesis defended,</li> <li>- 6 MSc thesis in progress</li> </ul> <p>Maida Dzapo (a PhD student that defended her thesis as part of the project in 2015) has received a docent appointment as a result of her PhD and publications. Amila Vranac (another PhD student, currently finishing her thesis) has received employment as a teacher assistant at FAFS in Sarajevo. Amila was selected among numerous applicants because her involvement in the project has given her numerous publications and research experience.</p> <p>Staff from FAFS has visited Ås and Ullensvang and the Norwegian staff has visited FAFS each year during the project period.</p>
<p><b>Output 7:</b></p> <p>The most interesting findings are published.</p>	<ul style="list-style-type: none"> <li>-6 scientific papers in journals covered by Web of Science.</li> <li>-6 scientific papers in other journals</li> <li>- 10 contributions to conferences and symposium.</li> </ul>



**Programme Area: Agriculture**

**Project title: Agriculture adaptation to Climate change – networking, education, research and extension in the West Balkan**

Norwegian project coordinator: NMBU/ IPM Noragric, Bishal Sitaula

Western Balkan partner/s (country, institution, name/title):

- BiH, Univ of Sarajevo, Faculty of agriculture and food science.
- Serbia, Univ. of Novi Sad, Faculty of agriculture,
- Serbia, Univ. of Belgrade, Faculty of agriculture,
- Montenegro, Podgorica, Biotechnical Faculty,
- University of Banja Luka, Faculty of Agriculture

Budget 3 655 000 / granted: NOK 3 655 000

Begin; in July 2012 / End dates: December 2015

Documents seen:

- Project Application
- Status report 2014

**Results framework:**

Planned Results	Results produced (activities undertaken)
<b>Impact, if any:</b> A science/knowledge base for minimizing climate change impact through agriculture adaptation in the Western Balkan	Knowledge base developed by contributions from project partners and open to scientists, researchers and students.
<b>Outcome/s:</b> Improved regional collaboration between WB institutions in the area of higher education and research in the field of agricultural adaptation to climate change	Outcome being attained by transferring course curricula (Organic agriculture, Global climate change) and helping University of Sarajevo to review existing courses and develop new ones. Learning management systems (LMS) knowledge and experience has been transferred. The project has developed a synergy with three HERD projects: “Mineral improved food and feed crops for human and animal health”, “Grassland management for high forage yield and quality in the Western Balkan” and “Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pasture land/grazing”. One result is the manual “Agriculture adaptation to climate change” that is being jointly prepared by project partners. Another result is regional workshop “Assessment, Measurement and Evaluation of Extension and Education”, Belgrade, September 2015. Regional network of scientists and researchers in agriculture and climate change has been developed.
<b>Output 1:</b> A Coordinated Team of scientists in WB is created	Researchers from each cooperating university part of the team, 4 PhD students selected from U. Sarajevo, 2 from Belgrade, 4 from Novi Sad, 1 from Banja Luka, for fellowship. 1 PhD finished.

	<p>MSc students supported: 15 from Sarajevo, 1 from Belgrade, 3 from Novi Sad, 6 from Banja Luka and 1 from Podgorica. 6 have defended MSc theses.</p> <p>Networking and knowledge transferred through local seminars for extension services.</p>
<p><b>Output 2:</b></p> <p>Region specific knowledge on agriculture mitigation to combat climate change in BiH is reviewed.</p>	<p>Scientific papers published addressing local and regional agriculture mitigation efforts: ca 40 article/ presentations produced.</p>
<p><b>Output 3:</b></p> <p>Relevant courses are developed for transferring knowledge on agriculture adaptation to climate change to students and other institutions in WB</p>	<p>Three new courses approved at the U. of Sarajevo; Global environmental change and agriculture, organic agriculture and soil and rural ecology.</p> <p>Teaching material for students has been prepared as well as the book <b>Rural ecology</b>.</p>
<p><b>Output 4:</b></p> <p>Learning management systems (LMS) introduced and incorporated in the University of Sarajevo and taken further to the agricultural extension services</p>	<p>LMS fully operational for following modules in Sarajevo:</p> <p>Rural ecology, Global climate change and agriculture, Geographic information System (GIS). LMS for the module Pedology, Organic agriculture and soil in process.</p> <p>Geographic information System (GIS) is a common module and result of the cooperation between Sarajevo and Podgorica.</p> <p>LMS introduced to extension service workers but need more attention.</p> <p>Manual on agricultural adaptation to climate change for extension services, students and farmers developed.</p>

**Programme Area: Agriculture**

Project title: **Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing**

Norwegian project coordinator: Dep. of International Environment and Development Studies - Noragric, NMBU

Western Balkan partner/s (country, institution, name/title):

- Bosnia and Herzegovina, University of Banja Luka, Faculty of agriculture.
- Bosnia and Herzegovina, University of Mostar, Faculty of agriculture and food technology,
- Serbia, University of Belgrade, Faculty of agriculture.
- Serbia, University of Belgrade, Faculty of VET Medicine,
- Kosovo, University of Pristina, (Kosovska Mitrovica), Faculty of Agriculture.

Budget 4 559 000 / Granted: 4 559 000 NOK

Begin – end dates. 01.01. 2012 - 31.12. 2015.

Documents seen:

- Project application, Status and progress report 2014, PP from University of Belgrade, MoM from HERD Agriculture Board meetings, working plan 2013,

Results framework:

Planned Results	Results produced (activities undertaken)
<b>Impact, if any:</b> A sustainable use of grasslands in the Western Balkans	
<b>Outcome/s:</b> Entrepreneurship in sustainable use of grasslands promoted based on scientific research and education with this knowledge transferred to farmers and other users.	Institutional improvement, Scientific network and contacts established, New ideas and knowledge related to conservation for animal feed (round balls) introduced, Increased knowledge of organisational models (eg. TINE)
<b>Output 1:</b> Increased and stimulated cooperation between higher education and research in the WB and between WB and Norway established	Visits, lectures by guest institutions, Visits among WB partners, Exchange visits between prof/ scientists from WB to NMBU, 5 joint workshops 10 new research papers, books, web site REAKT!, one group on Social network "Facebook"
<b>Output 2:</b> Entrepreneurship in sustainable use of pastureland/ grazing is stimulated through innovation, product and process development	[No actual results presented, rather activities undertaken:] Public presentations, networking knowledge transfer, hand outs and books for students developed. Participation of faculty technicians at different workshops, symposiums, and visits
<b>Output 3:</b> Develop and improve curricula and lectures at MSc and PhD level/ courses.	5 MSc /PhD courses improved. 10 new MSc and 2 PhD dissertation supported by the project. 5 BSc, 21 MSc, 9 PhD and 3 academic

	specialization students participated in HERD project in 2014.
<b>Output 4:</b> New field experiments for studying agricultural practices (plant and animal) established and where area for improvement can be studied and addressed.	4 field experiments conducted [results not clear]
<b>Output 5:</b> Knowledge related to sustainable use of pastureland/ grazing transferred to farmers and other users	Non-formal education for farmers and entrepreneurs developed and conducted. Cooperation with other institutions (extension services, NGOs) established and implemented 5-10 External services/ extension services trained. 20-30 farmers trained.

**Programme Area: Energy**

Project title: **Sustainable Energy and Environment in the Western Balkans (SEEWB)**

Norwegian project coordinator: NTNU, Dep. of Energy and Process Engineering

Other Norwegian partner/s:

- Sør-Trøndelag University College (HIST)
- New Energy Performance AS (NEPAS)

Western Balkan partner/s (country, institution, name/title):

- University of Belgrade, Department for Process Engineering
- University of East Sarajevo, Faculty of Mechanical Engineering (MFES)
- University of Sarajevo, Faculty of Mechanical Engineering (MFSA)
- University of Tuzla (UNTZ)
- University of Zagreb, Faculty of Electrical Engineering and Computing (FER)

Budget / Expenditures (to date): total allocation: 7 969 000 NOK

Begin / End dates: 2010 - 2014

Documents seen:

- Project Application
- Summary and Progress Reports for 2011
- Summary and Progress Reports for 2012
- Summary and Progress Reports for 2013
- Final Summary Report 2011-2014

**Results framework:**

Planned Results	Results produced
<b><i>Impact, if any:</i></b> Contribute to development of sustainable and environmentally friendly energy systems in WB countries.	Too early to identify the extent to which this will in fact occur, but the universities themselves seem optimistic that the MSc courses will make important contributions towards this Goal.
<b><i>Outcome/s:</i></b> Improved knowledge and local expertise in energy and environment field.	With all expected Outputs delivered, regional expertise and knowledge has been substantively improved, and the strengthened regional network and exchange of lecturers will ensure that this will continue on a sustainable basis.
<b><i>Output 1:</i></b> 5 new internationally recognized MSc study programmes in Sustainable Energy and Environment at 5 collaborating universities in 3 WB countries established.	5 new internationally recognized MSc study programmes in Sustainable Energy and Environment at 5 collaborating universities in 3 WB countries established.
<b><i>Output 2:</i></b> Physical infrastructure, particularly for the use of distance learning upgraded, as well as knowledge of distance learning among teachers.	Two classrooms for students' teamwork equipped at universities in Sarajevo and Tuzla, two video-conferencing studios established in East Sarajevo and Belgrade. Competencies at WB universities regarding the use of the classes were built.

<b>Output 3:</b> Two classes of MSc students accomplished at all five WB universities, 10-15 MSc candidates at each university, 50-75 MSc candidates in total.	Total number of students enrolled during 3 years was 215, of which 66 (31%) female. About 170 graduated.
<b>Output 4:</b> 2 of the MSc candidates from each of the WB universities participated in one semester stay at NTNU (20 in total).	21 best qualified students from WB universities spent semester stay at NTNU, of which 13 (62%) female. They did MSc. thesis work while there.
<b>Output 5:</b> Network of the 5 WB universities created, allowing for the mobility of teachers and students	Very good relations between all involved universities developed. Regular exchange of lecturers. New application for HERD (QIMSEE) developed together.
<b>Output 6:</b> Knowledge in this field disseminated through workshops, seminars and special courses for young professionals from energy sector in WB countries.	Slight delay and reduction of activities regarding dissemination, still a number of specialist courses for professionals organized.

**Comments:**

- The process of introducing the new Master's programmes experienced a one-year delay at some of the universities since a new degree programme most places has to go through a thorough approval process, which in most instances would begin with scientific vetting by an academic council within the relevant faculty; then to University management/board which would then forward it to the appropriate authorities for formal approval: a ministry, a canton (in the Federation in Bosnia) etc. At the same time the process had to adhere to the Bologna educational process, which itself was fairly new and not fully harmonised across the region (while most states adopted the standard 3 years BA + 2 years Master's structure, the Serb-speaking universities – and the University of Tuzla – have maintained a 4 + 1 year structure, which made for a somewhat different Master's level programme). Despite the hurdles, the new Master's programmes were in fact adopted across the entire region with a maximum of only a one year lag, which is a major achievement.
- During the project period, major efforts went into establishing sustainable networks among the local universities. A total of 14 workshops that each had 15-25 participants from all 5 universities were organised, each with its own theme, exchanging knowledge and experience.
- At Universities of East Sarajevo and Belgrade two modern video-conferencing studios have been established. Two new classrooms for students' teamwork with computers and software have been furnished at universities of Sarajevo and Tuzla

Programme Area: **Energy**Project title: **Quality Improvement of Master programs in Sustainable Energy and Environment - QIMSEE**

Norwegian project coordinator: Prof. Vojislav Novaković, Dep. of Energy and Process Engineering, NTNU

Other Norwegian partner/s: HiST Kompetanse

Western Balkan partner/s (country, institution, name/title):

- University of Sarajevo (UNSA), Faculty of Mechanical Engineering
- University of Banja Luka (UNBL), Faculty of Mechanical Engineering
- University of Tuzla (UNTZ), Faculty of Mechanical Engineering
- University of East Sarajevo (UNES), Faculty of Mechanical Engineering
- University of Montenegro (UNMNE), Faculty of Mechanical Engineering, Faculty of Metallurgy and Technology
- University of Belgrade (UBg), Faculty of Mechanical Engineering and Faculty of Technology and Metallurgy
- University Ss. Cyril and Methodius in Skopje (UNSCM), Faculty of Mechanical Engineering

Associated member of the network with no costs for the project: University of Zagreb, Faculty of Electrical Engineering and Computing (FER)

Budget: NOK 8.5 million

Begin / End dates: March 2014–end 2016

Documents seen:

- HERD/Energy application form, 5<sup>th</sup> call: QIMSEE (budget request: NOK 10,270.550)
- Reply to the application (dated 7 March 2014)
- QIMSEE Annual Progress Report 2014

Results framework:

Planned Results	Results produced (activities begun)
<b>Impact, if any:</b> To contribute to educating a national work force in WB countries that has adequate innovative qualifications in the energy sector.	
<b>Outcome/s:</b> Sustainable capacities of MSc. education in the energy and environment field has been established	
<b>Output 1:</b> Internationally recognized MSc programs in the field of “Sustainable Energy and Environment” established at the Universities of Banja Luka, Skopje and Montenegro.	This Output builds on the successful establishment of similar programs at 5 WB universities under the SEEWB project. Work begun at all 3 universities through training of academic staff.



<b>Output 2:</b> Close cooperation between WB universities established for continued collaboration and mutual support in achieving better quality MSc. studies.	Close collaboration from SEEWB continues and to be strengthened by including 3 new universities. Summer school at Orhid/Macedonia for 22 students from all universities held in June 2015
<b>Output 3:</b> The quality of the new MSc. programs at WB Universities increased to the level of international recognition of qualifications and international mobility of graduates.	All universities began developing Quality Enhancement Plans (QEPs) in the fall of 2014. QEPs were to have been ready during first half of 2015.
<b>Output 4:</b> Innovative MSc. thesis projects are developed that address industry and public sector problems.	Foreseen for early 2016
<b>Output 5:</b> Institutional quality and capacity of the WB Universities improved through better qualified teaching staff, better laboratory organization and logistics, networking and supplementing expertise.	Multifunctional laboratories installed fall 2015 in four new universities, so that a total of 6 universities have so far this improved infrastructure for collaborative work
<b>Output 6:</b> Linkages of WB Universities/energy program with industry and public sector in the WB region is established and supported.	National thematic conferences with industry and public institutions to be held in all 4 countries – are planned for edn-2015 and mid-2016

**Comment:** QIMSEE is a follow-on to the successfully completed SEEWB project (2011-2014). It builds on the results produced under SEEWB, adding three new universities to the area, and further strengthening the academic quality and the collaborations among the Western Balkans universities. Since the project experienced some delays in its actual start-up and only began early 2014, documentable results are so far limited.

Programme Area: **Energy**Project title: **Rethinking architecture and energy efficiency in buildings and urban development**

Norwegian project coordinator: Faculty of Architecture and Fine Arts, NTNU

Western Balkan partner/s (country, institution, name/title):

- University of Sarajevo (UNSA), Faculty of Architecture
- University of Banja Luka (UNBL), Faculty of Architecture and Civil Engineering

Budget: NOK 3 million

Begin / End dates: April 2014–end 2016

Documents seen:

- HERD/Energy application form, 5<sup>th</sup> call (budget request: NOK 4,366,000)
- Reply to the application (dated 7 March 2014)
- Contracts between NTNU and Universities of Sarajevo and Banja Luka
- Annual Progress Report 2014

Results framework:

Planned Results	Results produced (activities begun)
<p><b>Impact, if any:</b></p> <p>Contribute to a sustainable future by fostering attitudes, generating knowledge and applying modes of learning recognizing the impact of energy efficiency in architecture and urbanism.</p> <p>Contribute to and with processes for bridging social and political gaps in the country</p>	<p>Stakeholders (mainly teachers and students) from both universities were involved in all activities and encouraged to mutually exchange their views and knowledge.</p>
<p><b>Outcome/s:</b></p> <p>Sustainable capacity and activities in education and research into architecture, energy efficiency and sustainability established at graduate degree level in BiH universities.</p>	
<p><b>Output 1:</b></p> <p>Educational and research capacity (quality, number of staff, appropriate infrastructure) in Universities of Sarajevo and Banja Luka in field of architecture, energy efficiency and sustainability established for Master's level degree training.</p>	<p>Research groups formed at both universities and working on GIZ and HERD funded activities on energy and sustainability.</p> <p>Initiated a thematically connected research on energy efficiency in education, including local Bosnian stakeholders through questionnaires and interviews.</p>
<p><b>Output 2:</b></p> <p>Curriculum for Master's programs in architecture addressing energy efficiency at Universities of Sarajevo and Banja Luka established.</p>	<p>Guidelines for new curriculum agreed 2014</p> <p>Formal and informal meetings with the student board conducted and further cooperation with them planned.</p>
<p><b>Output 3:</b></p> <p>New mode of teaching based on research-design-build approach introduced in both participating universities: an integrated studio that is project based rather than smaller separate academic modules.</p>	<p>The integrated studio introduced, 2 courses run in 2014 with very positive feed-backs from both students and faculty. 2 more run in spring 2015 and further 2 planned for autumn 2015.</p> <p>Student and teacher survey conducted and resulting improvements implemented.</p>

<b>Output 4:</b> Institutional foundations for future Centre for Sustainable Development in Architecture established at University of Sarajevo.	
<b>Output 5:</b> Sustainable links to building industry, appropriate public offices, relevant professional associations established to improve energy efficiency in building policy, design and construction.	Started talks with GIZ and ETH Urban think tank on possibilities for cooperation. Representing HERD activities to municipal stakeholders in Bosnia, architects,...
<b>Output 6:</b> Gender equity in terms of involvement and student uptake in field established.	The objective of 50-50 male/female students and faculty benefiting from the project seems so far to be successful

**Comment:** The project was operationally approved in April 2014 in Norway but the University of Sarajevo (UNSA) did not formally approve the contract till December 2014 due to changes to UNSA's statutes and management structure taking place in the course of the year. Activities nonetheless had gotten underway well before then. The first visit by students and faculty to NTNU took place during the fall of 2014.

Programme Area: **ICT**

Project title: **BANOROB – Bosnian-Norwegian research-based innovation for development of new, environmental friendly, competitive robot technology for selected target groups**

Norwegian project coordinator: Narvik University College (NUC)

Other Norwegian partner/s:

- Norwegian University of Science and Technology (NTNU)
- PPM AS

Western Balkan partner/s (country, institution, name/title):

- University of Banja Luka (UBL), Faculty of Mechanical Engineering
- Innovation Centre Banja Luka (ICBL)

Budget: NOK 7,068,000

Begin / End dates: January 2012 –December 2014

Documents seen:

- BANOROB Application Form
- BANOROB Application Letter
- BANOROB Work Package description
- BANOROB Progress Report 2012 with Activity Report Q1 2013
- BANOROB Final Report 2012-2014

Results framework:

Planned Results	Results produced
<p><b>Impact, if any:</b></p> <p>Contribute to industrial growth in Western Balkan by providing highly educated people in production engineering with a special focus on robotics and automation</p>	<p>Modern and up-to-date courses are taught at the Faculty of Mechanical Engineering of University of Banja Luka. The mechanical engineering and production engineering studies are modernized and are now equipped with future proof laboratory equipment.</p>
<p><b>Outcome/s:</b></p> <p>SME companies in Bosnia have begun to apply modern robotics and automation in their production processes.</p>	<p>5 companies in Banja Luka have participated in an internship program, where they have been presented with solutions/optimization of their production/manufacturing processes.</p>
<p><b>Output 1:</b></p> <p>Improved university programs in production engineering with focus on robotics and automation at the University of Banja Luka (UBL) approved and in place, with about 300 students total taking them by project end.</p>	<ul style="list-style-type: none"> <li>• 4 BSc courses upgraded</li> <li>• 5 MSc courses upgraded</li> <li>• 1 joint course offered at NUC, NTNU and UNBL</li> <li>• About 120 students involved, 25% female</li> </ul>
<p><b>Output 2:</b></p> <p>A program of knowledge transfer has successfully established a university education model at UBL similar to Norwegian universities regarding the direct interaction with industry.</p>	<p>The new curriculum at UBL, the VALIP laboratory and the industrial contacts established during the BANOROB project are important and necessary steps towards better interaction between academia and industry.</p> <p>The BANOROB consortium is considering to establish an industrial research institute within production engineering at UBL with focus on (i) a market oriented R&amp;D institute within industrial</p>

	manufacturing and automation by utilizing laboratories and human resources within UBL, (ii) offer high- tech, cost efficient, skills and competences in modern manufacturing and automation to local industries in all of BiH.
<b>Output 3:</b> A Virtual Joint Laboratory for Advanced Information Technology in Production, VALIP, has been established at UNBL.	The high-tech lab has been successfully installed including equipment worth NOK 700,000.
<b>Output 4:</b> A business concept for a high tech company in the Innovation Centre Banja Luka (ICBL) in place that commercialises BANOROB research in WB.	<ul style="list-style-type: none"> <li>• 5 entrepreneurship candidates admitted to ICBL for incubator support</li> <li>• Project results presented at DEMI 2013 and DEMI 2015 and REDETE 2014 international scientific conference</li> </ul>
<b>Output 5:</b> Qualified manpower will in particular include (i) 6 MSc students from UNBL will be part of an exchange program with Norway, (ii) one PhD will have studies partly funded by project, (iii) 10 students will have had internships with industry.	<ul style="list-style-type: none"> <li>• 11 MSc students finished exchange in Norway [since no qualified PhD candidate identified increased number of MSc students instead]</li> <li>• 5 companies in Banja Luka offering internship collaboration – Until now 6 student interns finished</li> </ul>
<b>Output 6:</b> Joint publications, including with CEEPUS partners in Serbia, Romania, Slovakia, Poland, Bulgaria.	<ul style="list-style-type: none"> <li>• 16 joint scientific publications produced (list of publications provided in Final Report)</li> </ul>

**Comment:** The BANOROB Application noted that (i) it would involve all faculties of mechanical engineering in BiH, (ii) will give priority to students representing minorities in Western Balkans, (iii) will continue to educate highly qualified women, with a goal of 40% female participation rate.

(i): The development of the VALIP laboratory was delayed, so the project had less time to create a national academic meeting arena around the connected research activities. However, ideas and results from the BANOROB project were presented at the DEMI conferences in 2013 and 2015 and at the REDETE 2014.

The DEMI 2013 and DEMI 2015 conferences did not involve the universities of Tuzla, Sarajevo or East Sarajevo, which is also inside Republika Srpska, even though all three have faculties of mechanical engineering and all are involved in the HERD QIMSEE project. There was, however, active participation from the Serbian universities of Belgrade, Niš and Kragujevac.

(ii): From BANOROB Progress Report 2012: *“Students have been selected through public invitation made by UBL, published in newspapers “Glas Srpske”, as well as at UBL site. Selection criteria were developed in line with criteria used in TEMPUS projects and students were obliged to sign a contract stipulating their obligations and responsibilities with regards to funds provided under the project.”* Due to the complexity of BANOROB the students exchange program focused on MSc-level students and the number of qualified candidates was limited.

(iii): 25% percent was achieved.

**Programme Area: ICT**

**Project title: Norbotech – Norwegian-Bosnian Technology Transfer based on Sustainable Systems Engineering and Embedded Systems in the Fields of Cloud Computing and Digital Signal Processing**

Norwegian project coordinator: Buskerud University College (BUC)

Other Norwegian partner/s:

- Athene Prosjektledelse AS (first period)
- The Intervention Centre (IVC), Oslo University Hospital
- Norwegian Centre of Expertise Systems Engineering Kongsberg (NCE SE)
- Oslo Medtech

Western Balkan partner/s (country, institution, name/title):

- University of Tuzla, Faculty of Mechanical Engineering
- Business Innovation and Technology Center (BIT Center), Tuzla
- University of Banja Luka (UNBL), Faculty of Electrical Engineering
- Innovation Centre Banja Luka (ICBL)

Budget: NOK 8,881,000 (application sum: NOK 9,767,000)

Begin / End dates: January 2012 – November 2014

Documents seen:

- NORBOTECH Application
- NORBOTECH progress report January-December 2012

Results framework:

Planned Results	Results produced (activities initiated)
<b>Impact, if any:</b> Sustainable technological and social development in BiH based on collaborative relations between universities and industry within the ICT sector.	
<b>Outcome/s:</b> <ul style="list-style-type: none"> <li>• Improved education at BSc and MSc. levels in relevant engineering fields</li> <li>• Improved applied R&amp;D through clustering of companies and collaboration with universities</li> </ul>	
<b>Output 1:</b> Development of “Study of Excellence” in ICT fields at the 2 participating universities including internationalisation strategies, eLearning courses.	
<b>Output 2:</b> Curriculum development at BSc, MSc and PhD levels, including introducing/enhancing 12 teaching subjects, in ICT fields.	
<b>Output 3:</b> Establishment of applied research laboratories, for cloud computing and digital signal processing.	

**Output 4:**

Establishment of university-innovation center-industry networks leading to applied R&D projects, R&D applications, conferences.



**Programme Area: ICT**
**Project title: NORBAS – Norwegian, Bosnian and Serbian cooperation platform for university and industry in ICT R&D**

Norwegian project coordinator: Norwegian University of Science and Technology (NTNU), Faculty of Information Technology, Mathematics and Electrical Engineering

Western Balkan partner/s (country, institution, name/title):

- University of Banja Luka (UNBL), Faculty of Electrical Engineering – Republika Srpska/BiH
- University of Niš, Faculty of Electronic Engineering – Serbia
- Innovation Centre Banja Luka (ICBL) – Republika Srpska/BiH
- M:tel, Banja Luka – Republika Srpska/BiH
- Lanaco, Banja Luka – Republika Srpska/BiH
- Pakom Grupa, Niš – Serbia
- ALFATEC Ltd, Niš – Serbia
- Sentronis, Niš – Serbia
- TeleGroup, Niš – Serbia

Budget: NOK 6,250,000

Begin / End dates: April 2012 – December 2015 (revised end date)

Documents seen:

- NORBAS Application Form
- NORBAS Summary for 2012
- Three Intention Letters (private companies in Niš)
- NORBAS Progress Report 2014

Results framework:

Planned Results	Results produced (activities undertaken)
<p><b>Impact, if any:</b></p> <p>Economic growth and social development in BiH and Serbia improved due to strengthened role of ICT in productive sectors.</p> <p>Contribute to the transition of university education from an Eastern European culture to the harmonized Western European Bologna recommendations.</p>	<ul style="list-style-type: none"> <li>• ICT adaptation in the productive sector is a long term effect of better education and increased number of graduates with adequate skills and attitudes.</li> <li>• The project is designed around the cooperative work to support 4 PhD candidates. This gives insights in scientific standards as well as administrative rules and regulations. The candidates themselves are expected to be key transitions agents when starting in their academic positions after graduation.</li> </ul>
<p><b>Outcome/s:</b></p> <p>Private sector applying ICT due to better research, education and collaboration with universities.</p> <p>Changes in university rules, regulations, culture and standards.</p>	<ul style="list-style-type: none"> <li>• Too short time to measure private sector effects.</li> <li>• Significant impact at the cooperative partners. However, roots in the eastern traditions are very strong</li> </ul>
<p><b>Output 1:</b></p> <p>4 PhD candidates in ICT fields complete joint degrees – 2 from UNBL, 2 from UNis.</p>	<p>The four PhD candidates will finalise their joint degrees from NTNU/home university in 2015 and return to their universities as faculty</p>

The universities have agreed to issuing joint degrees in line with Bologna standards.	
<b>Output 2:</b> ICT education at the two participating universities improved through enhanced curriculum, manuals, laboratory exercises (5 courses at each university upgraded) plus improved staff teaching skills.	<ul style="list-style-type: none"> <li>• New curriculum, revised text books and manuals, lab exercises, etc in 5 courses at each university.</li> <li>• PhD students have contributed to updating teaching materials.</li> <li>• Teaching approach with more lab work in place</li> <li>• Cooperation among supervisors at NTNU and UoNiš are extended to other students and candidates</li> </ul>
<b>Output 3:</b> Collaboration with industry enhanced through (i) establishment of Technology Transfer Office (TTO) at UNBL in Banja Luka, (ii) internships and collaboration with ICT-based companies in Niš.	<ul style="list-style-type: none"> <li>• TTO in ICBL faced serious problems early phase, finally resolved though time, cost seen as high by participants. Actual results unclear.</li> <li>• Large number of students visited Nis industries, number of internships also appears high</li> </ul>
<b>Output 4:</b> Enhanced research capacity established through research groups at the two universities, leading to scientific papers published and joint applications for EU-funded research.	A series of papers have been prepared, the NORBAS report identifying those where the 4 PhD candidates were co-authors.

**Comment:** The Application had set a gender target of 40% of participants being female. 3 of the 4 PhD candidates are male. One of 4 supervisors are female. Project coordinator in Banja Luka is female.

Programme Area: **ICT**

Project title: **Applying ICT to Bosnia-Herzegovina's agricultural sector to improve pest management (IPM)**

Norwegian project coordinator: Bioforsk (PlanteHelse)

Western Balkan partner/s:

- Bosnia and Herzegovina, Sarajevo, Faculty of agriculture and food sciences.
- Bosnia and Herzegovina, Mostar, Faculty of agriculture and food technology.

Budget: 7 528 000 / Granted: 6 200 000

Begin / End dates: 03.2013 - 12.2015

Documents seen:

- Project application, Program document, status and progress report 2014

Results framework:

Planned Results	Results produced (activities undertaken)
<b>Impact, if any:</b> Improvement of agricultural production in Bosnia and Herzegovina	
<b>Outcome/s:</b> ICT and Integrated pest management (IPM) is adapted and applied in agricultural production and the use of chemicals is reduced	
<b>Output 1:</b> Information for decision support in plant protection is collected and available for users	ICT models for plant protection have been developed.
<b>Output 2:</b> Institutional development in applying ICT in IPM	The universities are seen as lead in ICT in IPM, asked to contribute/ disseminate knowledge in municipalities A network universities - extension services - grower organizations established, also in Republika Srpska
<b>Output 3:</b> Relevant technical equipment installed in the Universities and test fields	New technology introduced, installed at the universities Students and teachers trained in reprogramming, in developing model for practical use.
<b>Output 4:</b> Training and dissemination of data relevant for extension service and farmers are in place.	Systems with relevant data on mobile phone are tested and extension service can use their mobile phones for knowing when to spray.
<b>Output 5:</b> Students and scientific staff are educated, trained and familiar with ICT in IPM	2 PhD , 1 MSc and 1 BSc are writing their theses on research themes of practical relevance to the project. Workshop in Norway (7days) for 4 students, 2 staff. Improvement of current curriculum done through integration of research elements in the study modules : Integrated and organic plan production, integrated fruit production (BSc study) and in Integrated pest management on MSc level. ICT in IPM program has been developed and integrated in education.

Programme Area: **Maritime**

Project title: **SEAMED – Strengthening Education, Applied Research, and Marine Development in the Western Balkans**

Norwegian project coordinator: Lead Institution: SINTEF Fisheries and Aquaculture AS

Other Norwegian partner/s:

- Aalesund University College

Western Balkan partners:

- **Albania:** Agricultural University of Tirana, Faculty of Agriculture and Environment
- **BiH:** University of Sarajevo, Faculty of Agriculture and Food Science
- **Kosovo:** University of Prishtina, Faculty of Agriculture and Veterinary
- **Montenegro:** University of Montenegro, Institute of Marine Biology

Budget / Expenditures (to date): NOK 8 million

Begin / End dates: 2012-2015 (One PhD to be completed 2016)

Documents seen:

- Application Received 02.12.2011
- Reply to Application
- Application for additional funding
- Progress Report 2013
- Final Report 2015

*Results framework:*

Planned Results	Results produced
<p><b>Impact:</b></p> <p>Improved procedures and technologies, including optimal catch processing, by-product utilization, distribution, cooling and refrigeration, beneficial to the catch quality and cost reductions across the entire value chain, have been successfully introduced and applied.</p>	<ul style="list-style-type: none"> <li>• First-level results have largely been achieved with continuous improvements to the longer-term objective based on the new and improved capacities established</li> </ul>
<p><b>Outcome/s:</b></p> <ul style="list-style-type: none"> <li>• Domestic R&amp;D institutions have the capacities to continuously improve fish/shellfish handling and processing, in compliance with standardized European Guidelines</li> <li>• Strong clusters of R&amp;D institutions and industry that support sustainable growth and increase the competitiveness of Western Balkan seafood industries</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>Output 1:</b></p> <p><i>Institutional Development:</i> Local partners' knowledge and technology is up to date.</p>	<ul style="list-style-type: none"> <li>• Training of teaching staff and carrying out applied research provided by Norwegian partners</li> <li>• Better and more modern equipment supplied.</li> <li>• Training in how to use equipment provided.</li> </ul>

<p><b>Output 2:</b>  <i>Applied Research</i> New study modules on applied research and related topics developed through working together with R&amp;D partners</p>	<ul style="list-style-type: none"> <li>• Collaboration with industry and Norwegian partners identified areas of interest to carry out experiments and applied research</li> <li>• Applied research introduced in higher education curricula and teaching programs</li> </ul>
<p><b>Output 3:</b>  <i>Gender and Ethnicity:</i> Increased number of minorities and females involved in the program</p>	<ul style="list-style-type: none"> <li>• [Project results unclear regarding any changes to gender composition].</li> </ul>
<p><b>Output 4:</b>  <i>Sustainability</i> of the project ensured by educating and increasing capacity at the institutions</p>	<ul style="list-style-type: none"> <li>• Establishment of Aquaculture and Fisheries Department at the U. Of Tirana, Albania</li> <li>• Recruitment of academics well beyond plans: 5 MSc and 2 PhD students have successfully completed their studies (the last PhD student to defend thesis in 2016)</li> <li>• Several papers published</li> </ul>
<p><b>Output 5:</b>  <i>Regional Cooperation and joint Study/Research:</i> Planned collaboration includes representatives from government bodies, local industry and higher education institutions.</p>	<ul style="list-style-type: none"> <li>• Due to the project an arena for further collaboration between the institutions involved has been established.</li> </ul>
<p><b>Output 6:</b>  <i>Maritime environment improved:</i> Through the application of new knowledge and technology/ equipment pollution and stress on maritime resources are reduced</p>	<ul style="list-style-type: none"> <li>• More up to date equipment which is more environmentally friendly is being applied.</li> <li>• Greater awareness of environmental consequences of choice of practices and technology is leading to less negative consequences on the marine environment [any specific examples?].</li> </ul>

**Programme Area: Maritime**

Project title: **Montenegro Sustainable Maritime Competence Development Initiative**

Norwegian project coordinator: Aalesund University College

Other Norwegian partner/s:

- NILU – Norwegian Institute for Air Research
- NIVA – Norwegian Institute for Water Research
- Runde Environmental Centre

Western Balkan partner/s (country, institution, name/title):

- Montenegro: University of Montenegro, Maritime Faculty in Kotor

Budget / Expenditures (to date): NOK 10.75 million

Begin / End dates: 2012-2015

Documents seen:

- Application Signed 15.04.2013
- Progress Report 2014

**Results framework:**

Planned Results	Results produced (activities initiated)
<p><b>Impact, if any:</b></p> <p>Development of cruise activity and sustainable maritime tourism, coastal safety and international competitiveness of the maritime workforce in Montenegro.</p>	
<p><b>Outcome 1:</b></p> <p><i>Maritime Workforce:</i> A national maritime workforce with an educational background that makes it competitive in the high end global shipping market</p>	<p>Almost all 5,000 sailors in Montenegro are or have been working on traditional merchant ships, but are losing the competition against crews from countries like China and Philippines. By establishing an offshore training centre in Montenegro based on Norwegian expertise will provide opening for jobs in the rapidly growing offshore shipping business</p>
<p><b>Outcome 2:</b></p> <p><i>Cruise activity/maritime tourism:</i> Highly professional port management, ship traffic control, laws and regulations that ensures safe operations are in place to ensure sustainable cruise/maritime tourism</p>	<p>Workshops have been arranged in Norway and Kotor for authorities in Norway and Montenegro ("learning by seeing"). In August 2014 Ministers of Research and Trade &amp; Commerce of Montenegro, port authorities, rector of the University attended workshops in Aalesund, Geiranger, Nordfjord and the Norwegian Coastal Department.</p>
<p><b>Output 1:</b></p> <p><i>Institutional Development:</i> The training for the Maritime Education Degree programmes at U. of Montenegro are to international standards and in English</p>	<ul style="list-style-type: none"> <li>• Courses, workshops and seminars for upgrading staff, quality control and introducing new teaching approaches and materials</li> <li>• Staff exchanges to Norway: 3 professors in May 2014, 4 professors in June 2014</li> <li>• Maritime Law taught in the Kotor faculty improved through upgrading of senior faculty in Maritime Law</li> <li>• Four state of the art simulators installed and facilities renovated. The simulators allow for practical experience and certification, and are now in use:</li> </ul>

	<ul style="list-style-type: none"> <li>○ Engine room simulator</li> <li>○ Offshore simulator complete bridge, PSV and AHOC vessels</li> <li>○ STCW bridge simulator, with possibility to train pilots in the bay of Kotor</li> <li>○ Complete Dynamic Position simulator, certificated to offer courses according to Nautical Institute</li> </ul>
<p><b>Output 2:</b></p> <p><i>Curriculum Development:</i> University curricula are according to the standards of IMO for issuance of certification including for off-shore operations</p>	<ul style="list-style-type: none"> <li>• Updated curriculum to improve overall quality of the studies, also introducing new subjects.</li> <li>• Translation of teaching materials to English ongoing, established English course for the maritime sector for the fall of 2015. Increased English language skills to move studies into the English language taking place</li> <li>• Engineering staff attended several courses, workshops and seminars, in Kotor, Albania and Norway</li> <li>• First group of students using the simulators are from both Montenegro and Albania. In 2015 (first 6 months) 7 courses in Offshore Operations - nearly 60 students, 4 courses for the Norwegian ship-owner SIEM.</li> </ul>
<p><b>Output 3:</b></p> <p><i>Maritime quality dimensions addressed:</i> Improvement of safety and efficiency of navigation, safety of life at sea and the protection of the marine environment in place including tools for monitoring and control of air and sea pollution, environmental impact of cruise ships</p>	<p>Addressed through seminars and workshops:</p> <ul style="list-style-type: none"> <li>• Two workshops in Kotor in 2014 <ul style="list-style-type: none"> <li>○ The first one addressing marine environment, cruise traffic and traffic control.</li> <li>○ The other with focus entrepreneurship, offshore shipping and training standard</li> </ul> </li> <li>• Study tours/workshops in Norway with relevant actors to see how tourism, environmental issues and port administration works in Aalesund, the protected Geiranger and Loen.</li> <li>• Contact/workshops between Norwegian Coastal Directorate and Department of Transportation, Maritime Pilots and Port Administration in Montenegro</li> </ul>



**Programme Area: Development Studies**

Project title: **Security Transitions in the Western Balkans - From Conflict Zone to Security Community?**

Norwegian project coordinator: NUPI - Norsk Utenrikspolitisk Institutt

Other Norwegian partner/s:

Western Balkan partner/s (country, institution, name/title):

- Belgrade Centre for Security Policy (BCSP), Serbia
- Analytica, Macedonia
- Centre for Democracy and Human Rights (CEDEM), Montenegro
- Centre for Security Studies (CSS), Bosnia and Herzegovina
- Institute for International Relations (IMO), Croatia
- Institute for Democracy and Mediation (IDM), Albania
- Kosovar Centre for Security Studies (KCSS), Kosovo

Budget / Expenditures (to date): 4 197 000 NOK

Begin / End dates: 01/10/2010-31/03/2014

Documents seen: W-Balkan applications, Report from project visit to Western Balkan 2012, WBC – Final Reports, Report to the Ministry of Foreign Affairs on HERD-Development Studies.

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b> To contribute to better regional and national security policy and institutions.	The debate on security issues was fostered, policy makers are now better informed.
<b>Outcome/s:</b> 5. Better understanding of the security transitions in the WB, national and regional dynamics	Research shed light on how professional communities of diplomats, police officers and soldiers bring about the transformation from conflict to peace and security in the WB.
6. Increased research and institutional capacity of WB research institutions	Increased research and institutional capacity of WB research institutions.
7. Establishment of regional research networks supported.	Cooperation between the partner institutions intensified – already established networks strengthened.
8. Gap between the state of social science research in the WB and Norway narrowed.	Knowledge and skills exchanged between WB and Norwegian social scientists, the gap between the state of social science research in the WB and Norway narrowed, but still a need for further improvements.
<b>Output 1:</b> Professional and research competencies exchanged through visiting fellowships of WB researchers at NUPI, joint workshops and seminars.	8 research workshops and peer reviews with involvement of NUPI staff, fellowships of 7 researchers from seven WB think tanks at NUPI in April 2011, joint dissemination activities, researchers from WB received instructions on academic practices from NUPI staff.

<p><b>Output 2:</b></p> <p>Research findings disseminated to the research community (book and academic articles published, findings presented at conferences and scholarly fora, a larger closing conference organized in 2013).</p>	<p>Closing conference held in April 2014, joint book accepted to be published by Ashgate (to be published in 2015), book will be translated to 3 languages, 16 presentations on scholarly fora made.</p>
<p><b>Output 3:</b></p> <p>Research findings disseminated to policy-makers and wider public (project web site, public presentations in all WB countries and Norway including policy-makers and officials, media reports).</p>	<p>Series of national events for policy audiences conducted, project results discussed with state officials, 6 popular science presentations, 15 media appearances, project website – online platform providing information about the project results established.</p>

**Programme Area: Development Studies**

**Project title: European integration in higher education and research in the Western Balkans**

Norwegian project coordinator: Institutt for pedagogikk, University of Oslo

Other Norwegian partner/s: NIFU Nordisk institutt for studier av innovasjon, forskning og utdanning, Oslo

Western Balkan partner/s (country, institution, name/title):

- University of Zagreb, Croatia
- Faculty of political science, Belgrade, Serbia
- Centre for Education Policy, Belgrade, Serbia

Budget / Expenditures (to date): 4 533 470 NOK

Begin / End dates: 01/03/2011-28/02/2014

Documents seen: W-Balkan applications, Report from project visit to Western Balkan 2012, WBC – Final Reports, Report to the Ministry of Foreign Affairs on HERD-Development Studies.

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b> To contribute to sustainable economic growth, stronger social cohesion and stable political institutions in Western Balkan countries.	
<b>Outcome/s:</b> 1. Strengthened human capacity of partner institutions in the Western Balkan countries in the area of higher education and research policy analysis.	2 PhD projects at Uni. of Zagreb not completed within the timeframe of the project, but well underway. Their employment at the Uni. of Zagreb questionable.
2. Evidence-based policy making	Conferences in which policy makers from the region participated were organized.
3. Strengthened knowledge base with respect to data and indicators on higher education and research in the Western Balkan countries.	Online knowledge base established.
<b>Output 1:</b> Data base on higher education and research policies developed.	Data base was developed: <a href="http://www.herdata.org">www.herdata.org</a> : containing data on higher education in WBC, 7 national case studies, findings from the survey on university governance and management practices. The webpage will be maintained by the Centre for Educational Policy (Belgrade).
<b>Output 2:</b> Joint book published.	Book in English published by Peter Lang Verlag, translated into local languages.
<b>Output 3:</b> Joint articles published in scientific journals	5 articles published in scientific journals (more articles being reviewed or developed).

<b>Output 4:</b> 2 PhD projects completed and defended	2 PhD students located in Zagreb funded, they took number of courses at the UiO, special PhD course organized in the region with partners from Oslo.
<b>Output 5:</b> Post-doc project report completed	The post-doc produced report on excellence and quality in higher education in the WBC.
<b>Output 6:</b> Plan for future research cooperation developed	New networks created among researchers within the region and with researchers outside the Western Balkans. The network prepared an application for Horizon 2020.

**Programme Area: Development Studies**

Project title: **Legal Culture and Anti-Corruption Reform: The Case of the West Balkans**

Norwegian project coordinator: FAFO (initially Chr. Michelsen Institute)

Other Norwegian partner/s: -

Western Balkan partner/s (country, institution, name/title):

- ARGUMENT, Agency for Applied Political and Sociological Research, Beograd, Serbia
- Balkan Policy Institute (IPOL), Prishtina, Kosovo
- NGO "PRO MEDIA", Skopje, Republic of Macedonia

Other partners: Cornell University, Department of Government, USA

Budget / Expenditures (to date): 4 395 000 NOK

Begin / End dates: 01/09/2010-30/06/2014

Documents seen: W-Balkan applications, Report from project visit to Western Balkan 2012, WBC – Final Reports, Report to the Ministry of Foreign Affairs on HERD-Development Studies.

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b>	
<b>Outcome/s:</b> 1. Description of legal culture in Kosovo, Macedonia and Serbia, based on analysis of perceptions, attitudes, experiences and practices of people in these countries.	Large-scale quantitative and qualitative data collected, allowed mapping of the legal culture in Kosovo, Macedonia and Serbia.
2. Account of externally-driven anti-corruption efforts undertaken in the WB and of how they are perceived in WB countries.	Project provided an account of externally-driven anti-corruption efforts undertaken in the WB and the manner in which they are perceived by ordinary citizens and elites.
<b>Output 1:</b> App. 10 articles in academic journals.	2 articles published in journals, 5 accepted for publication, 1 article revised and resubmitted to journal following peer-review, additional articles are planned to be published by the end of 2016.
<b>Output 2:</b> Two books: one on legal culture and anti-corruption policies in the WB, one on European legal cultures	A book proposal and two sample chapters on legal cultures in the WB to be submitted to Cambridge University Press by the end of 2015.
<b>Output 3:</b> Papers presented at international and national academic conferences.	12 conferences and seminar presentations. 10 round table discussions in the WB countries.

**Programme Area: Development Studies**

Project title: **The role of natural resources in sustainable rural livelihoods in the western Balkans. The distribution and flow of costs and benefits.**

Norwegian project coordinator: Norsk Institutt for Naturforskning - NINA

Other Norwegian partner/s: Norsk senter for bygdeforskning

Western Balkan partner/s (country, institution, name/title):

- American University in Kosovo (AUK), Republic of Kosovo
- Macedonian Ecological Society, Republic of Macedonia
- Protection and Preservation of Natural Environment in Albania, PPNEA, Albania
- Biology Department, Faculty of Veterinary Medicine, Zagreb University, Croatia

Other partners: KORA, Switzerland

Budget / Expenditures (to date): 3 600 000 NOK

Begin / End dates: 01/01/2011 – 31/01/2014

Documents seen: W-Balkan applications, Report from project visit to Western Balkan 2012, WBC – Final Reports, Report to the Ministry of Foreign Affairs on HERD-Development Studies.

Results framework:

Planned Results	Results produced
<b>Impact, if any:</b> Enable the development of knowledge-based policies aimed at achieving poverty reduction through sustainable rural development and sustainable and equitable use of natural resources.	Policy makers are better informed about these issues.
<b>Outcome/s:</b> 1. The use of natural resources is mapped, economic and socio-cultural importance of these resources explored, institutional arrangements influencing the use of these resources examined, results placed within the policy context.	Holistic linkages between poverty, rural areas and development of natural resources provided.
2. Regional social science research capacities are built and regional cooperation between partners established.	Partners have increased their capacity in the applied social science research. One Albanian partner completed MA, another begun PhD, Macedonian partner doing MA, Croatian partner almost completed PhD, Kosovar partner completed honours thesis. Cross border cooperation between institutions was fostered.
<b>Output 1:</b> Project results disseminated to decision makers and politicians through meetings and presentations of country specific policy briefs and final report in English and local languages.	Final publication of results <u>not yet published</u> . Results communicated to local policy makers. Partner organizations channelled the results into their work with decision makers. Participating NGOs using the research findings for their advocacy work.

<p><b>Output 2:</b> Project results disseminated to scientific community and development experts – articles published in scientific journals, presented at scientific conferences, fact sheets and final report distributed.</p>	<p>Publication process slower, 1 article published, more articles still to be published.</p>
<p><b>Output 3:</b> Public informed about the research findings through distribution of copies of reports and policy briefs and possible presentations.</p>	<p>4 popular science publications produced. 7 appearances in the media.</p>
<p><b>Output 4:</b> Classes for students from relevant educational institutions held, students provided with experience from research work.</p>	<p>Training for a group of 7 project assistants (some of them students) conducting the research organized in Norway and in WB. At least 5 other students participated in the data collection and received indirect training.</p>



**Programme Area: Development Studies**

Project title: **Innovation policy learning from Norway in Western Balkans**

Norwegian project coordinator: NIFU Nordisk institutt for studier av innovasjon, forskning og utdanning, Oslo

Western Balkan partner/s (country, institution, name/title):

- Mihajlo Pupin Institute, Science and technology Policy Research Institute (STPRC), Belgrade Serbia
- Ekonomski Institut Sarajevo, Sarajevo, Bosnia and Herzegovina
- University St. Kliment Ohridski – Bitola (Prilep), Faculty of Economics, Macedonia
- The Institute of Economics, Zagreb, Croatia

Budget / Expenditures (to date): 1 300 000 NOK

Begin / End dates: 10/01/2011-31/01/2014

Documents: W-Balkan applications, Report from project visit to Western Balkan 2012, WBC – Final Reports, Report to the Ministry of Foreign Affairs on HERD-Development Studies.

Results framework:

Planned Results	Results produced
<b>Impact</b> Policy makers in the Western Balkans develop and implement improved innovation policies.	
<b>Outcome/s:</b> 1. Good practices with regards to innovation policy development and policy learning in other countries are identified.	
2. Emerging innovation systems in the Western Balkans are analysed.	Innovation systems in 4 WB countries analysed.
<b>Output 1*:</b> A series of working papers, to be presented at the project workshop: each WB partner provides min. 2 papers, NIFU provides paper on Norwegian (Nordic) innovation policy.	SWOT analyses of innovation systems in 4 WB countries and reports on the national innovation systems in these countries provided.
<b>Output 2:</b> A synthesis report on the basis of working papers, done by NIFU and The Institute of Economics (Croatia).	
<b>Output 3:</b> Papers published in the academic journals.	Special issue of the International Journal of Transitions and Innovation Systems <u>to be published</u> : 4 national papers, joint survey paper by Radošević and Knell.
<b>Output 4:</b> The research findings are disseminated during a policy-learning workshop organized for policymakers in the WB.	Public workshop “From national innovation systems to innovation policy learning in BiH, Croatia, Macedonia, and Serbia” (government officials participated): 06/2012, Sarajevo.
<b>Output 5:</b> Dissemination of the project results at workshops, conferences, roundtables etc.	Special session at the European Association of Comparative Economic Studies conference: 09/2012, Paisley, UK

## Annex F: Conversation Guide

*Dear colleague,*

*Scanteam has been asked by Norway's Ministry of Foreign Affairs to assess the programmes in higher education, research and development (HERD) in the Western Balkans that it funds. In this connection, we would like to have a conversation with you regarding your views and experiences with those parts of the HERD programme you are familiar with. All interviews will be confidential. Thank you for your assistance!*

### Relevance:

- Did your project address a relevant need in your/ your partner institution?
- How was this priority established (are there any formal decisions by the local institution that lie behind this claim)?
- Apart from the individuals directly engaged in the project, are others at your university/ institution interested in this project? If so, in what way?
- Has management of your university/institution been involved and supportive of this project? In what ways have they shown support?
- Are there other donors funding projects in the same field? Who? How does the HERD project fit into this larger project portfolio?
- In what ways does this project address relevant needs in-country? What are the arguments for funding this project compared with other projects in this field?

### Results Achieved:

- What are the key results produced by the project?
  - How do they compare with the original plans?
  - What do you see as the main causes for the positive results?
- Are there important short-comings compared with the original plans?
  - If so, what caused the short-falls?
- Have any of the results come about because of cooperation with other funding sources (EU, other donors, other national actors)? If so, which ones, and how did the cooperation contribute?

### Efficiency:

- Have relations to your cooperation partner been predictable, transparent?
- Have you been able to access the resources promised in a time-efficient and cost-efficient manner? If not, what have been the hurdles?
- Have the reporting requirements been reasonable, given the size of the project?
- Has the Norwegian partner contributed to the quality of the project? In what ways?

- Has the overall management of the project been good, transparent, efficient? If there have been issues in this field, what were they?
- Does the management of the overall programme appear good, transparent, efficient? If there have been issues in this field, what were they?

Effectiveness:

- In what areas do you see that the project has provided innovations/new approaches that are useful to your institution?
- In what areas do you see that the project has provided innovations/new approaches that are useful to your research?
- In what areas do you see that the project has provided innovations/new approaches that are useful to business and employment? What are the documented effects that you can point to?
- In what ways has the project contributed to improving the skills in the national labour market? What are the documented effects that you can point to?
- Has this project strengthened your relationships with other research-based institutions in the region? If so, in what ways?
- Has the project contributed to gender equality? What are the documented effects that you can point to?
- Has the project contributed to enhance participation of ethnic minorities? What are the documented effects that you can point to?

Sustainability:

- Are the two parties (Norwegian and Western Balkans-based) interested in continuing the collaboration after this project funding ends? In what ways is this likely to happen?
- Is this project important compared to other projects in your faculty/university/institution?
- Will the activities initiated under the HERD programme continue at the local institution?
  - If so, will this have to be funded by other external sources (EU, ....)?
  - Is this area likely to be funded by own funds (state budget, university budget)?

**The actual questions asked during our conversation will depend on which areas you feel comfortable addressing.**

**Thank you very much for your time!**

## Annex F-1: First Conversation, MFA Coordinator

- What were the arguments for selecting the five programme areas?
- What were the reasons for selecting the five coordinating institutions (what were the alternatives)?
- How has the management of the programme been in terms of (i) relations to the Norwegian programme coordinators, (ii) relations to W Balkans partners? Has work load been as expected? If not, in what ways has it been different from expectations (more work, more complexity in relations, ...)?
- What do you see as the main achievements in the programme (specific projects, increased collaboration, ...)? What have been the greatest positive surprises (different from the first question, since here it may be unexpected interest, collaboration across W Balkans states etc. but not necessarily big project achievements)?
- What have been the greatest disappointments, obstacles, challenges? Could anything have been done differently to address these?
- Which of the three objectives areas – national workforce education; innovation in the four sectors; insight from the development research – would you say has been most successful? What are the reasons?

## Annex F-2: First Conversation, Norwegian Programme Coordinators

- What made your institution apply for the W Balkans funding? Why was your institution selected as coordinator?
- How did you structure the allocation of funding for your programme (competition, who invited, ...)? How many applications did you get, and what characterised those selected versus those not selected?
- How has the management of the programme been in terms of (i) relations to the MFA, (ii) relations to the Norwegian project coordinators, (iii) relations to W Balkans partners? Has work load been as expected? If not, in what ways has it been different from expectations (more work, more complexity in relations, ...)?
- What do you see as the main achievements in the programme (specific projects, increased collaboration, ...)? What have been the greatest positive surprises (different from the first question, since here it may be unexpected interest, collaboration across W Balkans states etc but not necessarily big project achievements)?
- What have been the greatest disappointments, obstacles, challenges? Could anything have been done differently to address these?
- Which project achievements do you believe have the greatest chances of sustainability, and why (specific projects, or by country, or by institution, or thematic areas)?
- Projects were to contribute to educating a national workforce in Bosnia and Kosovo. To what extent have projects in your programme contributed to this (not relevant for Development projects)?
- Who are key persons for us to speak with in W Balkans? Which ONE person should we speak with now who can discuss more principled questions on the programme side?

## Annex G: Survey Questionnaire

This is the survey questionnaire that was sent to all stakeholders in the HERD programme.

\*\*\*\*\*

*Dear colleague,*

*Scanteam has been asked by Norway's Ministry of Foreign Affairs (MFA) to assess its support to the programmes in higher education, research and development (HERD) in the Western Balkans. As part of this study, we would appreciate it if you would please take the **10-15 minutes** it will take to answer this short survey, as this will help us provide the answers the MFA is looking for. All replies are anonymised. If you could fill out this questionnaire by Monday 15 June, we would be grateful!*

### **Section A: Identifiers:**

- Programme Area: AGRI – ENGY – ICT – MAR – DEVT/RES
- Country: ALB – BIH – CRO – KOS – MAC – MON – SER – NOR
- Role: programme manager – project coordinator – researcher – administration
- Gender: male - female

For the following questions, please provide a valuation of the degree to which you agree with the given statement or the rating you would give to the performance:

- 1:** Strongly disagree/highly negative
- 2:** Disagree/ negative
- 3:** Agree/positive
- 4:** Strongly agree/very positive
- 0:** Don't know/not relevant/do not have an opinion.

### **Section B: Results delivered:**

- The project has delivered the planned results
- The project has produced unexpected positive additional results
- The project encountered problems that delayed/limited the expected results
- This project has been highly useful to my own work
- This project has been highly useful to my institution
- This project has been a disappointment and did not deliver the results I had hoped for
- The project has led to improved relations to other universities in the region
- The project has contributed to more longer-lasting relations between the Norwegian and Western Balkan partners (sustainability of relations)

*[Text space will be provided for explanation/elaboration]*

**Section C: Relevance and Ownership:**

- The project was based on priorities set by the Western Balkans partner/s
- The project was developed by the Western Balkans partner/s
- The project received strong support from my colleagues and superiors
- The project received strong support from the management of my institution
- The project provided innovative impulses to the work of the Western Balkans partners
- The project produced relevant new knowledge for business / private sector
- The project led to documentable improvements for women in this field
- The project led to documentable improvements for ethnic minorities in this field

*[Text space will be provided for explanation/elaboration]*

**Section D: Programme and Project Management:**

- The project management in my institution has been clear and efficient
- The relations to my main partner (in Norway, in Western Balkans) have been easy and constructive
- The project management has addressed problems and solved them so that the project has progressed well
- The links between my project and the larger sector programme (Energy, ICT etc.) is clear and logical
- Funding has been provided as promised and easy to access

*[Text space will be provided for explanation/elaboration]*

- The reporting requirements have been reasonable given the size of the project
- Overall, the efficiency of the project has been very good

## Annex H: Field Work Programme

Field visit programme by institution, place, programme and team member/s

<i><b>Institution – City</b></i>	<i><b>Unit – Programme</b></i>	<i><b>Team members</b></i>
<b>Monday 22 June</b>		
University of <b>Sarajevo</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne, Jorunn, Eva, Stephanie
University of <b>East Sarajevo</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne, Jorunn, Eva, Stephanie
University of <b>East Sarajevo</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne
<b>Tuesday 23 June</b>		
University of <b>Sarajevo</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne
University of <b>Sarajevo</b>	Faculty of Agriculture, <b>Agriculture</b>	Jorunn, Stephanie
University of <b>Sarajevo</b>	Faculty of Agriculture, <b>Maritime</b>	Stephanie
Ekonomiske Institute, <b>Sarajevo</b>	<b>Development</b>	Eva
University of <b>Sarajevo</b>	Faculty of Architecture, <b>Energy</b>	Arne
<b>Wednesday 24 June</b>		
University of <b>Tuzla</b> ,	Faculty of Mechanical Engineering, <b>Energy</b>	Arne
Business Innovation and Technology Center (BIT) <b>Tuzla</b>	<b>ICT</b>	Arne
Innovation Centre of <b>Banja Luka (ICBL)</b>	<b>ICT</b>	Arne
University of <b>Sarajevo</b>	Faculty of Agriculture, <b>Agriculture</b>	Jorunn
<i>Car Sarajevo – Kotor/Montenegro – 8 hrs</i>		Eva, Stephanie
<b>Thursday 25 June</b>		
University of <b>Mostar</b>	Faculty of Agriculture, <b>Agriculture</b>	Jorunn
University of <b>Banja Luka</b>	Faculty of Agriculture, <b>Agriculture</b>	Arne
University of <b>Banja Luka</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne
University of <b>Banja Luka</b>	University Entrepreneurship Center, <b>ICT</b>	Arne
Institute of Maritime Biology, <b>Kotor</b>	<b>Maritime</b>	Stephanie, Eva
University of Montenegro, <b>Kotor</b>	Maritime Faculty of Kotor, <b>Maritime</b>	Stephanie, Eva
<b>Friday 26 June</b>		
Ministry of Science, <b>Podgorica</b>	<b>Maritime</b>	Stephanie
CEDEM, <b>Podgorica</b>	<b>Development</b>	Eva
University of Montenegro, <b>Podgorica</b>	Faculty of Metallurgy and Technology, <b>Energy</b>	Eva
<i>Car Banja Luka – Sarajevo – Kotor – 4 + 6 hrs</i>		Arne, Jorunn



Sunday 28 June		
<i>Car Kotor – Prishtina – 7 hrs</i>		Jorunn, Eva, Stephanie
Monday 29 June		
University of <b>Prishtina</b>	Faculty of Agriculture, <b>Maritime</b>	Stephanie
American University in Kosovo, <b>Prishtina</b>	Center for Energy and Natural Resources, <b>Development</b>	Eva
Royal Norwegian Embassy, <b>Prishtina</b>		Jorunn, Eva, Stephanie
University of <b>Belgrade</b>	Faculty of Mechanical Engineering, <b>Energy</b>	Arne
Tuesday 30 June		
University of <b>Novi Sad</b>	Faculty of Agriculture, <b>Agriculture</b>	Arne
Wednesday 1 July		
Belgrade Centre for Security Policy, <b>Belgrade</b>	Number of think tanks, <b>Development</b>	Arne
University of Niš, <b>Belgrade</b>	Faculty of Electronic Engineering, <b>ICT</b>	Arne

## Annex I: Comments in Web Survey

The Comments below were provided by respondents to the web-survey. They are organised by the three main fields they were asked to comment on, but the internal order is random – entered by date. Comments that were only editorial in content have not been included here. Only changes made have been some language editing, removal of redundant text – indicated with dots .... – while text in square brackets were entered by the team.

### Results Produced (24 comments in total)

a.1 This project has led to many positive implications for the community in Kosovo. First of all, it enabled to carry out research in rural areas that have not been investigated before which brought to the surface many problems encountered but were not given attention/priority by the municipality. Secondly, this project has been highly beneficial for the university as it helped in the training and gaining professional experience for the students. It also helped develop better relations with the neighbouring university and research partners as in Macedonia, Albania and Croatia. Personally, I have used the project as the opportunity to bring attention to issues overlooked and published newspaper articles about it. I have also used the project data to carry out my own Bachelor's thesis in relation to the issues presented in the research. Overall, the project has been a success in many terms as depicted by the scope of activities derived from it.

\*\*\*\*\*

a.2 In addition to the foreseen project outputs, we have developed some additional results such as development of one additional module. We have also produced a manual for the extension services.

\*\*\*\*\*

a.3 At the same time I prepared two proposals. One proposal was of NORBAS project supported by HERD, and the second one was FP7 FET project i-RISC supported by EU. Both of them were accepted. There is no doubt that the NORBAS project was more useful both for myself and my institution. The connections among NTNU, UNIS and UBL were improved and some new relations were established. My colleague from University of Arizona was also involved a little bit. All in all, really useful experience.

\*\*\*\*\*

a.4 Very good project, excellent collaboration with Norwegian and regional colleagues.

\*\*\*\*\*

a.5 In 2001 [my faculty] started the project of the MFA, "*Competence transfer and institutional contact and co-operation between faculties of Agriculture, Forestry and Veterinary Medicine in SEE*". As a participant at all Program cycles during the last 15 years, I can emphasize that the realization of projects activities had numerous planned and unexpected additional positive results, including those related to co-operation among faculties in WB region after the war. In my opinion, as the professor of the Department of Animal breeding and Genetics, the planned and unexpected additional positive effects of the actual project, as well as of the previous projects, can be documented also through Institutional development, through development of teaching curriculum and development of research methodology. The cooperation with the main partner from Norway, Noragric, has been constructive and successful, due to the active role of department management, and especially due to the

project leader activities .... We had a strong support from the main partner from Norway also in the development of multidisciplinary aspect and new trends in animal livestock production, the fact that can be clearly documented.

\*\*\*\*\*

a.6 As a participant representing the [faculty of ...], I consider that the project *“Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing”* .... has delivered the planned results. In my opinion, HERD project in agriculture in the WB region has primarily contributed to high education development of teaching, and research methodology, the substantial improvement in certain sectors of agriculture and therefore to the development of the region in terms of economy. This project has been highly useful to my own work, especially to improvement of my education work and research in Conservation of animal genetic resources and their utilization. It helped me to introduce new lessons for students and to publish several scientific papers as the results of project activities and two books. Additionally, this project has been also highly useful to my institution. During the project a strong cooperation among the WB institutions was formed through joint activities such as research as well as through higher education program, which is a good basis for further cooperation among WB institution. In the field of higher education HERD project has provided Institutional development supported by the two new curriculum at the FVM Belgrade and by funding of research work, especially for master and PhD students. The implementation of activities in the field of knowledge transfer has enabled farmers to improve production processes in agriculture.

\*\*\*\*\*

a.7 The unexpected positive results are connected with the inclusion of Republika Srpska in the final year.

\*\*\*\*\*

a.8 The project completely fulfilled all scheduled tasks and some additional work has been done and many positive results gained.

\*\*\*\*\*

a.9 Greatest compliments for you, an absolutely important project. I wish to thank all of you and sincerely this project has a great impact on my career and my life.

\*\*\*\*\*

a.10 The project *“Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing”* has delivered the results planned in the project application .... This project has been highly useful to my own work, especially to improvement of my education work and research in Genetics, Plant breeding and Plant genetic resources. It helped me to introduce new lessons for students and to publish several scientific papers and two books. Additionally, this project has been also highly useful to my institution .... The project has led to improved relations to other universities in the region ... The project has contributed to more longer-lasting relations between the mentioned Western Balkan partners and Norwegian University of Life Sciences....

\*\*\*\*\*

a.11 The project *“Research, education and knowledge transfer promoting entrepreneurship in sustainable use of pastureland/grazing”* has delivered the planned results. Examples of such results are institutional development in WB institutions, curriculum development, study

visits, organization of joint workshops, purchase of field laboratory and office equipment, development of teaching and research methodology, project web site, participation of faculty technicians at different workshops and symposiums, and joint researches, mostly in Grasslands, Animal breeding, Genetic resources and Biodiversity. The project has also produced unexpected positive additional results. Such additional results include newly established cooperation with governmental institutions and NGOs. The project has not encountered any serious problems that limited the expected results. This project has been highly useful to my own work. Specifically, the project contributed to curriculum development for courses Meadows and pasturelands, Forage crops, and Special grasslands, on different study levels of postgraduate studies (MSc or PhD). My institution ... benefited from this project. Thanks to the support given by the project, my faculty has invested in new educational means, as well as in field and laboratory equipment related to the subject of the project. The project has led to improved relations to other universities in the region. During the project, I met new colleagues from University of Mostar, Bosnia and Herzegovina, and I have intensified the existing cooperation with colleagues from University of Banja Luka and University of Prishtina / Kosovska Mitrovica. The project has contributed to more longer-lasting relations between the Norwegian and Western Balkan partners. Project partners have visited Norwegian University of Life Sciences and met professors working in different fields, and we have communicated about the existing project results and possibilities for future cooperation. Leaderships of our universities have signed MoUs as a basic document for all other agreements related to joint higher education activities and application for future research and development projects.

\*\*\*\*\*

a.12 The project did not start until January 2014, and had ambitious goals. It turned out quickly that you have to have patience when establishing cooperation between countries with such different culture. However, there has been an unexpected strength of the project that we are project managers for a similar project in Montenegro which has provided the opportunity to initiate a collaboration between the University of Montenegro and University of Vlore. Such cooperation is completely new for both universities and provides interesting possibilities for the future. There has also been a strong focus on strengthening the English skills of staff at the University. Lack of English skills among Albanian students and staff is one of the biggest challenges for an integration with the rest of Europe.

\*\*\*\*\*

a.13 The major problem was at the start of the project, namely that the lead institution in Norway had little or no experience with work overseas. Also the initial selection of Project leader [private company] was less than optimal and the Bosnian staff was overruled and not taken enough into consideration. Another major problem was the difficulty in finding companies both in Bosnia and in Norway that were willing to take in and educate to fulfil the ambition of Industry Master part of the project. This was in my opinion mainly an issue with lack of relevant companies both in BIH and Norway and a general concern on the part of the companies. Also the budget was probably too small for the great ambitions of the project.

\*\*\*\*\*

a.14 The project encountered problems that delayed/limited the expected results - problems with public procurement procedures.

a.15 .... the project "*Montenegro Sustainable Maritime Competence Development Project*" started June 2013. The project has attracted an attention in Montenegro which is far above the expected and followed closely by the Minister of Science. Another unexpected result is that the project has initiated a good relationship between the Universities of Vlore and Montenegro.

\*\*\*\*\*

a.16 It was incredible experience being part of this project. Hope that it will be extended for another period of time in order to enable other students to grasp the opportunity to do research work in their topics.

\*\*\*\*\*

a.17 In this project we started to cooperate with some institutions from the region that previously we did not have cooperation. The contacts made will be very useful in the future, and we are planning some projects together. Students are trained for independent work, gained their Master's theses, and published results at international conferences. Industry partners created contact among themselves and a platform for business cooperation. We had some short delay at the beginning of the project because we had to change industrial partner in Montenegro, but all planned results are achieved and even beyond expectations.

\*\*\*\*\*

a.18 We cooperate with Albania, Bosnia, Montenegro and Kosovo, though it was not possible to show that in your question. That was the most interesting challenge and we have learned a lot about the education system, the needs both in industry and at the university. The project has linked the university/education closer to industrial needs and the industry see the importance in R&D.

\*\*\*\*\*

a.19 .... in relation to the delayed/limited expected results, there have been issues that were planned but could not be realized in the timely manner due to regulations/laws within partner countries, such as: running a new degree is a process that takes around 2-3 years from initiation to accreditation and running....

## Relevance and Ownership (22 comments in total)

b.1 This project also provided a new perspective when discussing issues such as ethnic and gender factors relevant to the research interests. This information was then used to bring attention to these issues where subsequently it had an impact indirectly. Considering that the ... Mayor of Prishtina who was once the project consultant as well as Public Policy Professor at A.U.K., it seems that these issues had the intended impact as later on there was a campaign organized for women's handmade products in the centre of Prishtina along with local products put in display. Simultaneously, this project gave figuratively speaking voice to those who might not have been directly heard and helped discuss issues pertinent to them.

\*\*\*\*\*

b.2 It has to be noted that the project was very innovative for the institution as introduced new research topics. Project provided scholarship for our students. In the selection process priority was given to female students.

\*\*\*\*\*

b.3 Project was developed in close cooperation between Norwegian and Bosnian institutions

\*\*\*\*\*

b.4 Two companies from Nis are partners in the project ... and very useful talks from Norwegian side were given to students and professors about relation between university and innovation.

\*\*\*\*\*

b.5 The project was based on priorities set by the Western Balkans partners, among them the most important was to teach students how to sustainable manage livestock production in environmental conditions of Western Balkans. The project was based on priorities in agriculture set by the WB partner/s and developed by the WB partner/s. HERD project is, an innovative impulse in the WB region, regarding the implementation of activities relating to the development of specific agricultural areas, promotion and favouring positive social attitudes, especially those related to support women and ethnic minorities in this area. Activities aimed at strengthening communication between WB institutions and the production sector as especially important impulse that HERD project encourages. Management of my institution gave strong support to the Project especially activities related to implementation new curriculum for postgraduate students (new specialization, "Livestock organic production"), support master and PhD students trough Project. As the results of the cooperation with the main partner from Norway, Noragric and Project leader in the field of animal production, 8 scientific papers were published. The project has contributed to longer -lasting relations between the Norwegian and Western Balkans.

\*\*\*\*\*

b.6 Several women have/will obtain MSc degrees due to their involvement in this project.

\*\*\*\*\*

b.7 The project was strongly supported by superiors from partner institution. Also, project produced new interesting knowledge for private sector (creation of appropriate starter cultures, improvement of cheese production). Several females were strongly involved in project, so, gender issue was respected.

\*\*\*\*\*

b.8 The project was based on priorities set by the Western Balkans partners. These priorities are related to research, education and knowledge transfer promoting entrepreneurship in sustainable use of grasslands. These priorities lied to the improvement of life of population in rural areas of WB. The project was developed by the Western Balkans partners and it has linked the most relevant WB scientists in the field of pastureland / grazing. The project received strong support from my colleagues at the Department of Genetics at Faculty of Agriculture, Chef of Department, Director of the institute of Crop Sciences and the management of my institution, including dean and vice-deans. The project provided innovative impulses to the work of the Western Balkans partners; it helped the establishment of our field experiments and the transfer of knowledge towards extension services and farmers. With respect of local specifics, many innovative activities were



conducted, as the follow: establishment / improvement of course curricula related to grasslands, livestock production, plant and animal breeding, genetic resources, and interdisciplinary, researches related to improving of sustainable management of grasslands and livestock production, evaluation of biodiversity of autochthonous populations, and protection of natural resources. The project produced relevant new knowledge for business / private sector. We have supported young people, MSc/PhD students to finish their dissertations. Most of these students were women, and several of them were ethnic minorities in this field.

\*\*\*\*\*

b.9 The project was based on priorities set by the Western Balkans partners, among them the most important was to teach students how to sustainable manage with grasslands and livestock production in environmental conditions of Western Balkans. The project represents joint effort of leading WB Universities / Faculties of Agriculture / Veterinary medicine and the Department of International Environment and Development Studies, Noragric, Aas. It was developed by five Western Balkans partners, including the most relevant WB scientists in this field of pastureland / grazing from the University of Belgrade, the University of Banja Luka, and the University of Mostar. The project was strongly supported from my colleagues from Department for Special Crop Sciences, and also signed and followed by my superiors at the Institute and Faculty level. Management of my institution gave strong support to the project. I think that the project provided innovative impulses in higher education, research and development of the Western Balkans partners. Here, I would like to emphasize innovation in educational process (as distance learning), newly established scientific cooperation at national and international level, upgrading of technician's knowledge, publishing of new books and journals in pastureland/livestock production and plant genetic resources, and participation and organization of conferences and seminars. The project produced relevant new knowledge for business / private sector, and this knowledge was transferred to agricultural advisers and farmers via agricultural extension services. Also, we have gave a series of interviews for local journals, national radio and TV about project activities and results. The project led to documentable improvements for women and ethnic minorities in this field. We have supported many young people, MSc and PhD students, to finish their dissertations, among them most were women and several of them were students form ethnic minority. University of Belgrade has also supported one student from WB partner country, Bosnia and Herzegovina, to complete his dissertation.

\*\*\*\*\*

b.10 The project has given the students and staff at the University of Vlore opportunity to see how the education of the maritime industry is utilized and developed in close collaboration with industry. In addition, there has been established a cooperation forum to follow up the quality of engineering and maritime education, offering students specialization in offshore operations; and through cooperation with the University of Montenegro further develop an international offshore competence and training centre of Norwegian standard. The focus in the next phase will be to create ... understanding within the team for how the different nationalities, culture, language, religion must be respected in order to perform work in an efficient and safe [manner] in accordance with international company quality standards. The cultural differences between Norway and Albania are



obvious, and therefore we have prioritized close monitoring and cooperation to achieve long-term results

\*\*\*\*\*

b.11 The Project was developed by a team composed of faculty from Tuzla, Banja Luka and Oslo and to a lesser degree by the Kongsberg team. It was decided early on that the Kongsberg team would lead the project. The leadership of the project was initially very difficult, especially since the management team in Bosnia did not get the necessary support. Later in the project better leadership was provided from Kongsberg and it was possible to fulfil many of the goals set initially. A major benefit of the project was better cooperation between the Bosnian Partners from RS and FBiH respectively.

\*\*\*\*\*

b.12 The project was developed with support from Norway's partner and we had a huge help in this part, but in implementation too. HERD project gave to me, to my colleagues and my institution a great opportunity to work on scientific research in relevant field and we achieved all expected results. With this project we also improved technical capacities of our laboratory and we included many students [in the research projects]. Project partners from Norway transferred to our institution a great experience and knowledge in dairy science (especially in molecular biology).

\*\*\*\*\*

b.13 Add 5.7/ 5.8: At all the institutions project coordinators considered gender and ethnic issues especially regarding students being selected to spend one semester at the NTNU.

b.14 There were a number of women that participated in the project but gender equality was hard to obtain in the field of mechanical engineering.

\*\*\*\*\*

b.15 It has been organized several courses for a Norwegian company that has hired international crew of two ships in April / May 2015. The lessons learned from these courses shows that there is a need for building up courses for multicultural crew and using the simulator we can focus on requirements posed to the team on offshore ships. The focus will be to create respect and understanding within the team as to how the individual team members must respect the different nationality the culture, language, religion to perform work in an efficient and safe manner in accordance with company quality standards.

\*\*\*\*\*

b.16 For the first time we had cooperation with one industrial partner and cooperation was perfect, company gained results and improved some technological processes. Both females and males were involved in the project, as researchers and students.

\*\*\*\*\*

b.17 I hope that improvement of housing facilities and knowledge in welfare for sure affect positively and position of women in country side. After field research and talk with farmers, my personal opinion is that maybe women have better understanding of animal welfare and needs for its improvement in BiH.

\*\*\*\*\*

b.18 It was very nice to see how the cooperation between researchers, students and industry improved during the project period, where the cooperation crossing borders between

Kosovo, Bosnia etc. We would very much like to continue our cooperation and work at the West Balkan.

\*\*\*\*\*

b.19 Project development was based on joint priorities and developed by both Norwegian partner and West-Balkan partners.

### Project and Programme Management (20 comments in total)

c.1 From the beginning, we had numerous discussions and meetings with our partners which helped grasp and carry out the project as intended. The funding was delivered as promised and on time along with the reporting requirements which showed the project progress. Additionally, the project data from the energy and forestry section has been used with the combination of our own Center data and research work and published in a booklet available for everyone (policy makers, other research centres, government, people, basically all stakeholders). As such, this project proved to be very beneficial in terms of exploring issues related to environment and energy among others, and building relations with other partners all while making a difference in the intended country (which in this case was Kosovo).

\*\*\*\*\*

c.2 Although we did not face with some specific problems, the project was coordinated by Norwegian partner on professional manner and with strong technical support.

c.3 Very nice experience for our management and accounting. We learned very much from NTNU how to organize work efficiently.

\*\*\*\*\*

c.4 Excellent project management, excellent collaboration

\*\*\*\*\*

c.5 During the project we had strong support from the main Norwegian partner institutions which was realized through professor and student exchanges, laboratory work, scientific publications and books. Permanent consultation with Norwegian experience about some problems in field of agriculture has been very helpful and continued cooperation with the Norwegian institutions would be very important for the region. The relationships with main partner in Norway and in Western Balkans have been easy and constructive. The project management has addressed problems and resolved them so that the project has progressed well. The funding has been provided as promised and easily accessible. We have the workshops during [?], partners have analyzed project results and progress during the year and suggested new activities and actions needed for improvement of the cooperation. Project partners also communicate via e-mails, Skype, and phone. Such discussion gave a good base for development of well-designed and achievable work plans for each project year. On the end of the each year we have participated in writing of the "Status and progress report". The project coordination team, which consisted of two project leaders (one from Noragric and the other from WB) together with project coordinator proposed the first version of the "Work Plan". After revision, done according to suggestions of all partners, the final version is issued. Then, all partners sign a Contract based of the plan. After that, on the

beginning of each project year, the Faculty of Agriculture as all other WB partners sent invoice to Accountancy of Noragric and received the planned budget in very short period. The reporting requirements have been reasonable given the size of the project. The coordination team of the project has united all contributions of project partners into one harmonized text of the Report. Overall, the efficiency of the project has been very good; it has set a good basis for development of Agriculture and Institutional cooperation between WB countries and the Norwegian institution especially in the field of higher education.

\*\*\*\*\*

c.6 The format for reports has been somewhat unclear.

\*\*\*\*\*

c.7 Cooperation with partner was easy and excellent and funding was provided as promised

\*\*\*\*\*

c.8 Funding was provided as promised from you, but very hard for me to access because of very complicated rules in my country.

\*\*\*\*\*

c.9 The project management in my institution has been clear and efficient... while over 20 students and two technicians also took part in the project. The relations to my main partner in Norway, Noragric, have been easy and constructive; due to active role of department management and especially due to project leader activities .... WB partners have visited Noragric (NMBU) and they have performed exchanging visits among them in aim to improve the educational and scientific cooperation. The project management has addressed problems and solved them so that the project has progressed well. The links between my project and the larger sector programme was clear and logical. For example, project partners cooperated within the HERD project with local communities, NGOs, local extension services and research institutes. Faculty of Agriculture University of Belgrade established cooperation with NGO "Rural Serbia", the extension service in Valjevo, Institute for small grain in Kragujevac and Institute for vegetable crops in Smederevska Palanka. Funding for the project has been provided as promised and easy to access. ...

\*\*\*\*\*

c.10 The project management in my institution was based on two researchers ... while in the project were involved several researchers from our institutes, students, and technicians. This organization was clear and efficient to perform all project activities. The relations to Noragric as the main partner have been easy and constructive thanks to the efforts of the project leader ... but also to the leadership, librarian, accountant and other staff of Noragric department. The project management has addressed problems and solved them so that the project has progressed well. We have established excellent communication between all WB institutions / partners in the project. Each year we have organized workshop. During the workshop, partners have analyzed project results and progress during the year and suggested new activities and actions needed for improvement of the cooperation. Project partners also communicate via e-mails, Skype, and phone. Such discussion gave a good base for development of well-designed and achievable work plans for each project year. During the project realization we have established clear and logical links between the project and the larger sector programme. The strongest link was established with extension services

(experts in agriculture) and farmers, but also with organizers of ethnic food fairs, local communities, researchers and NGOs focused on agriculture. Our results ... have been provided as promised, and they are easy to access via scientific journals and internet. All of them were reviewed by external experts. In all our published and presented results we have acknowledged to the project for support. On the end of each year, we have reported to the Board of HERD/Agriculture about our activities and results, respecting the reporting requirements which have been reasonable in respect to the size of the project. Taking all mentioned facts into consideration, I believe that the efficiency of the project has been very good.

\*\*\*\*\*

c.11 In the next phase of the project we recommend using the University of Montenegro as a spearhead, they are motivated to establish a better relationship with their neighbours cultural differences are not as pronounced, travel distances are short, and their level of development is higher than in Albania. It is still recommended that the project is managed from Norway, the main motivation for Montenegro is the possibility of a future close cooperation with the maritime sector in Norway and access to resources for private sector development

\*\*\*\*\*

c.12 The project was very ambitious and large and was constructed to obtain a number of goals that may retrospectively have been too high. As mentioned earlier the lack of Company involvement was a major issue and probably not realistic goals had been set for the Industry Master part of the project. The cooperation between four institutions was also complex from a project management issue. There was a lot of changes in the Project Management which was initially planned to be run by a Project Management organization, but was taken over by the Norwegian Lead Institution itself. These changes caused significant delays and confusion about the overall management. The project has in my opinion still had a quite positive impact and has created better relations between the Bosnian Partners and has started several potential opportunities for further cooperation between Norwegian and Bosnian Institutions and Companies. The lack of a Professional Project Management team was one of the major problems and should have been resolved in a different fashion than taking over direct management by academic staff

\*\*\*\*\*

c.13 Norwegian team was very correct and accurate.

\*\*\*\*\*

c.14 It is hard to answer the question "The links between my project and the larger sector programme (Energy, ICT etc) as there is no official "larger sector strategy" in the country.

\*\*\*\*\*

c.15 The contact and relation between institution and ship-owners in Norway and Montenegro has been very good. The results achieved up to now is above expectations, but this project period has been too short to establish sustainability. One of the goals of the project has been to build up expertise at the University of Montenegro in offshore operations to qualify the students for the attractive offshore positions. Norwegian ship-owners recruit seafarers from Eastern Europe to work in the offshore business, and those jobs require high qualifications. Norwegian offshore expertise is internationally recognized, and through

long-term cooperation between the University of Montenegro and AAUC it is possible to build up an international training centre in Kotor to ensure recruitment of qualified seafarers for Norwegian ship owners. The next phase of the project will continue to follow up the quality of maritime education, offering students specialized in the offshore; further develop an international offshore competence and training centre of Norwegian standard. There will also be a focus on the creation of employment in the maritime industry and cruise tourism

\*\*\*\*\*

c.16 Project management team, organization and implementation of the project, was very efficient. All people were very helpful and open for collaboration. Reporting requirements were reasonable and we had enough time to prepare reports and other requirements.