



STUDIJŲ KOKYBĖS VERTINIMO CENTRAS

Vilniaus universiteto  
***HIDROMETEOROLOGIJOS PROGRAMOS (621F83001)***  
**VERTINIMO IŠVADOS**

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**EVALUATION REPORT**  
**OF *HYDROMETEOROLOGY (621F83001)***  
**STUDY PROGRAMME**  
at Vilnius University

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Išvados parengtos anglų kalba  
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## DUOMENYS APIE ĮVERTINTĄ PROGRAMĄ

|                                                      |                                                                  |
|------------------------------------------------------|------------------------------------------------------------------|
| Studijų programos pavadinimas                        | <i>Hidrometeorologija</i>                                        |
| Valstybinis kodas                                    | 621F83001                                                        |
| Studijų sritis                                       | Fiziniai mokslai                                                 |
| Studijų kryptis                                      | Gamtinė geografija                                               |
| Studijų programos rūšis                              | Universitetinės studijos                                         |
| Studijų pakopa                                       | Antroji                                                          |
| Studijų forma (trukmė metais)                        | Nuolatinė (2)                                                    |
| Studijų programos apimtis kreditais                  | 120 ECTS                                                         |
| Suteikiamas laipsnis ir (ar) profesinė kvalifikacija | Geografijos magistras, Hidrometeorologijos magistras nuo 2010 m. |
| Studijų programos įregistravimo data                 | 19-05-1997 Nr. 565                                               |

## INFORMATION ON ASSESSED STUDY PROGRAMME

|                                                     |                                                            |
|-----------------------------------------------------|------------------------------------------------------------|
| Name of the study programme                         | <i>Hydrometeorology</i>                                    |
| State code                                          | 621F83001                                                  |
| Study area                                          | Physical Sciences                                          |
| Study field                                         | Physical Geography                                         |
| Kind of the study programme                         | University studies                                         |
| Level of studies                                    | Second cycle                                               |
| Study mode (length in years)                        | Full-time (2)                                              |
| Volume of the study programme in credits            | 120 ECTS                                                   |
| Degree and (or) professional qualifications awarded | Master of Geography, Master of Hydrometeorology since 2010 |
| Date of registration of the study programme         | 19-05-1997 No. 565                                         |

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The Centre for Quality Assessment in Higher Education

# CONTENTS

|                                              |    |
|----------------------------------------------|----|
| CONTENTS .....                               | 3  |
| I. INTRODUCTION.....                         | 4  |
| II. PROGRAMME ANALYSIS .....                 | 5  |
| 1. Programme aims and learning outcomes..... | 5  |
| 2. Curriculum design .....                   | 5  |
| 3. Staff .....                               | 7  |
| 4. Facilities and learning resources .....   | 8  |
| 5. Study process and student assessment..... | 10 |
| 6. Programme management .....                | 12 |
| III. RECOMMENDATIONS .....                   | 14 |
| IV. GENERAL ASSESSMENT .....                 | 15 |

## I. INTRODUCTION

The external evaluation of the Master study programme in *Hydrometeorology* at Vilnius University (hereafter, 'the University') was initiated by the Centre for Quality Assessment in Higher Education of Lithuania nominating the international expert group (hereafter, the 'expert group' or 'assessment panel') formed by Professor Geoffrey Robinson (University of St. Andrews, Scotland – team leader), Professor Tommi Inkinen (University of Helsinki, Finland), Professor Maris Klavins (University of Latvia, Latvia), Professor Jürg Luterbacher (University of Giessen, Germany) and Dr. Miglė Stančikaitė (Institute of Geology and Geography of the Nature Research Centre, Lithuania).

The evaluation of the study programme ('the programme') made use of the following documents: Law on Research and Higher Education of the Republic of Lithuania (2009); Order on External Evaluation and Accreditation Procedure of Study Programmes (2011); Methodology for Evaluation of Higher Education Study Programmes (2010); General Requirements for Master Study Programmes (2010) and Geography Study Field Regulation (2004).

The basis for the evaluation of the study programme is the Self-Assessment Report (SAR), written in 2011, its annexes and the site visit of the expert group to the University on 19 October 2011. The Faculty of Natural Sciences ('the Faculty') coordinates the programme, which is delivered by staff from departments within the Faculty and in the Faculty of Chemistry. Staff from the Department of Hydrology and Climatology (the 'Department') deliver most of the specialist training subjects. The site visit incorporated all required meetings with different groups: the administrative staff of the Faculty, staff responsible for preparing the self-assessment documents, academic staff, students of all years of study, graduates, and employers. The expert group inspected various support facilities and resources (classrooms, laboratories, library, computer facilities), examined students' final works, and various other materials.

After discussions and preparations of conclusions and remarks, the expert group presented introductory general conclusions of the visit to the Department's self-assessment team. The group subsequently met to discuss and agree the content of the report, which represents the members' consensual views.

It may be noted that both the Bachelor programme in *Hydrology and Meteorology* and the Master programme in *Hydrometeorology* are located in the same department within the same faculty. They share the same facilities; many staff contribute to both programmes, albeit with different loadings; administration and management are essentially the same for both programmes; and employers who met with the evaluation group related to both programmes and interacted at department and faculty levels. The site visit covered both programmes simultaneously and, inevitably, the two evaluation reports have much in common.

## II. PROGRAMME ANALYSIS

### ***1. Programme aims and learning outcomes***

The programme aims and learning outcomes are well defined, clear and publicly accessible; they appear on the University website and in the University's fact sheet for student admissions. They build on the aims and outcomes of the bachelor programme *Hydrology and Meteorology* in both deepening and widening directions. The expert group was pleased to note among the suite of aims a reference to educating globally-minded specialists who successfully integrate into the modern European and world community. The intended learning outcomes are clearly expressed in terms of what a graduate should know and be able to do as a result of following this programme.

The programme aims and learning outcomes are consistent and compatible with the type and level of studies, the qualification offered and with the name of the programme. The learning outcomes are achievable and meet the requirements of the World Meteorological Organisation for university-level graduate meteorologists and hydrologists, as well as the mission of the Lithuanian Hydrometeorological Service, which is a principal employer and one of two main social partners; the other main social partner is the Nature Research Centre. Both social partners are involved in discussions over revisions of the programme's aim and outcomes. Graduates' knowledge and general (transferable) skills as well as critical and analytical thinking, IT and research abilities find employment both in operational and administrative roles in divisions of the Ministry of Environment and other scientific agencies. With good research skills they are also able to progress into doctoral studies, in geography and various fields of physical science.

All students (at both bachelor and master level) expect to secure employment, although hydrologists and meteorologists are not highly paid. Students are generally able to proceed into subject-related employment after completing the programme, but graduates from the bachelor programme will find themselves in competition with higher-level graduates for the more scientific positions. The bachelor-level graduates who met with the assessment panel were all following the master level programme while also in paid employment.

#### ***Main strengths and weaknesses***

##### ***Strengths***

The programme's aims and outcomes are directed towards satisfying national needs for hydrologists and meteorologists.

Graduates are also equipped to proceed to doctoral studies in a variety of related fields.

The formulations of learning outcomes are clear and achievable.

### ***2. Curriculum design***

The curriculum comprises only mandatory subjects in a design that meets all legal requirements. The subjects are mainly deepening (85 per cent of credits); the remainder are intermediate, that is

deepening and broadening. Research, including the final thesis, accounts for 45 per cent of the programme's credits.

The study subjects are spread evenly over the first three semesters of study; they are logically linked and avoid undue repetition of theme and content. The fourth semester is devoted entirely to preparation of the thesis. The programme requires students to carry out research individually and to summarise research results in their final thesis. The primary aim of the thesis is to develop skills in independent research and develop a deeper knowledge and understanding of the selected research area. The topics of the final thesis are closely related to the theoretical lectures and practical classes. It is through the choice of research topic for projects and the final thesis that students develop their specialisation in climatology, meteorology, hydrology or marine sciences. Learning outcomes are mapped onto the study subjects, which together enable achievement of the intended learning outcomes.

The programme has strengths in theoretical subjects and professional practice. The content of the subjects or modules is consistent with the type and level of the studies but the content of the programme does not fully reflect the latest international achievements in science and technology. Important issues such as radar meteorology and climatology, remote sensing, current and future climate change issues and potential impacts at the national level, analyses of extreme weather and climate events, advanced geostatistics, improved visualisation tools and an additional course in English language at the master level would greatly enhance the curriculum.

Employers' and graduates expressed opinions that although students acquire a good theoretical knowledge, they were not always able to apply this knowledge well enough and need help in the working environment. This applies to mathematical and statistical skills, and also to work with model output data. Employers expressed a wish that graduates would have more experience in applying theory to practical applications. The SAR also indicates areas where the programme could be enhanced in recognition of recent and anticipation of new study and research areas. The suggestion is that provision should be made for co-requisite/refresher courses in theoretical subjects, with emphasis on basic concepts and methods required in studies of fluid dynamics and thermodynamics; climate monitoring and prediction; relevant processes including life and death, evolution and extinction; in particular, vegetation evolution and its role in the hydrological cycle and in atmospheric gas composition and air pollution. Perhaps the adoption of the new modular structure will provide opportunities to integrate more up-to-date multidisciplinary examples with theoretical constructs but the small number of students limits the viability of optional courses that would allow such a wide range of specialisms.

### ***Main strengths and weaknesses***

#### ***Strengths***

The curriculum design process takes cognisance of the needs and suggestions of all major stakeholders.

The curriculum provides excellent opportunities for practical experience.

The curriculum enables the acquisition of knowledge and the development of skills needed to enter employment directly related to the study field and to begin a scientific research career.

#### ***Weaknesses***

The latest international achievements in science and technology in the study field are inadequately represented in the curriculum.

### **3. Staff**

The staff who deliver the programme meet all legal requirements. Most have a long experience of teaching and research, all satisfy more than the minimum requirements. Collectively their numbers are more than adequate and they are well qualified to ensure the intended learning outcomes. In total, 10 academic staff contribute to the programme. Three are full professors, four associate professors, and three lecturers. All have doctoral degrees and are full-time teachers. Most of the curriculum (90 per cent) is the responsibility of staff in the Department. Staff from the Department of Zoology and the Faculty of Chemistry teach the remainder of the programme. All are adequately qualified to ensure the intended learning outcomes. The staff who met with the expert group impressed by their motivation and enthusiasm to educate the students in their study field. They are generally satisfied with their environment and according to the students, the teachers devote a significant time to the supervision and guidance of their thesis and provide them with up-to-date literature from their own personal scientific holdings.

During the reporting period 2006-2010, the holders of three teaching posts changed. These changes were occasioned by retirements, new appointments and replacing subjects in the curriculum. The expert group was not made aware of any issues related to staff turnover.

Staff-development opportunities exist at Department, Faculty and University levels. These include a variety of workshops on issues of research methodology and techniques as well as classroom teaching techniques that are well attended by the staff. Additionally, staff discuss scientific results with staff from other universities, and attend conferences and courses. Some staff members are active in collaborative projects mainly in Lithuania and some take part in international research and educational projects, organise international conferences and symposia and take part in activities of international scientific societies. Opportunities have been taken to improve qualifications by teaching traineeships abroad. Each year staff collectively participate in between nine and 14 international events but on the whole the level of scientific activity among the staff is modest. The point has been made that the staff include the only teachers of meteorology in Lithuania, who by definition are therefore the best (and worst). To measure themselves alongside contemporaries elsewhere they should aim to increase their international activity and profile of scientific publications. This suggestion applies to all the staff, many of whom have high national reputations as *the* Lithuanian experts in their field.

Whatever means can be employed should be used to encourage scientific activity amongst the staff and raise the research profile of the Department. A major issue is the relative lack of publications in international peer-reviewed journals. International visibility of their research activities, participation in international interdisciplinary programmes, and more scientific peer-reviewed publications should be envisaged for the future. This in turn would impact on the teaching activities, supporting the inclusion of more recent scientific and technological advances in the curriculum. In turn, this would give students new opportunities to contribute to current research themes and increase their own chances of international research collaboration and even employment after graduation. The agencies in which they are likely to be employed are responsible for Lithuania's reporting and contributions to international programmes such as the

IPCC. The international perspective is necessarily strong in the areas where graduates will work; it should be much stronger in their studies. (The weather does not stop at Lithuania's national boundaries!)

### ***Main strengths and weaknesses***

#### ***Strengths***

The programme is in the hands of enthusiastic and well-qualified staff, which supports the quality of the studies and enables the achievement of the intended learning outcomes.

The staff seem to be largely competent in the subjects they teach, actively participating in projects directly related to the study programme content, and willing to participate in staff-development courses to improve research and teaching methods.

#### ***Weaknesses***

The staff in general has a poor record of research activities: projects are mainly local or national; published research results are mainly in national journals; and even at that level, the record is modest.

ADDENDUM. Information provided by the University upon receipt of the Evaluation Report indicates that over the period from 2006, the eight members of the Department staff have collectively published, mainly as joint authors, 23 papers in ISI listed journals and nine other publications in the international press. This is not a high activity rate by European standards but if this information had been available at the time of review, the wording of the noted weakness would have been less severe. Recommendation 1 at the end of the report remains applicable, even though progress has already been made in the recommended direction.

The University also provided more information on staff participation in international projects but that has already been acknowledged as strength.

## ***4. Facilities and learning resources***

All the lectures and practical classes are held in the same Faculty building; one practical class in a zoology laboratory and all others in the four specially designed facilities in the Department. All classrooms are equipped with the necessary learning technology, all of which was obtained during the period 2006-2010. The meteorology laboratory has been renovated and the main auditorium and hydrometeorological laboratory are being refurbished. Given that student numbers do not exceed 13, the premises for studies are more than adequate in size and generally in quality.

The provision of laboratory equipment is not, as yet, adequate for the studies. There are still inadequacies in the provision of computer-based workplaces where students are able to use their own laptop computers. The computer classroom has only eight workplaces and licensed software for GIS and statistical analysis. The current upgrading of facilities is addressing some of the equipment weaknesses, both of hardware and software, but the number of computers provided for student use will remain low. The expert group saw the first tranche of technical hardware that has arrived as part of the current procurement exercise using European and Lithuanian national funding. This included an automatic training meteorological station that the expert group saw

part way in its construction in the University grounds, near to the Faculty. New measuring devices and analytical tools are also now available. The expert group can appreciate the improvements in the programme studies that are being put into place. This is a first step for a better and more appropriate education of students in the subject field. Additional funding will be needed, however, if maintenance, periodic replacement and consumable items are to be adequately provided for.

The Faculty library has 42 workplaces, three of them computer based, a provision that is hardly adequate to provide for all the Faculty's programmes. The library holds about 95 per cent of the subject literature and about 75 per cent of the general science literature used in the programme. There are other resources in the University library but in general, library resources for the two hydrometeorological programmes (bachelor and master) are generally poor, in comparison with standards expected and achieved in comparable European institutions. The literature is mainly in the Lithuanian language, the programme's principal language, and indeed the language used in most employment situations. (As yet, students are not benefiting from the programme aim of enabling graduates to integrate into the modern European and world community.) There are few up-to-date texts available in Lithuanian; staff prepare and provide supplementary materials on the website as part of subject information. The staff also lend books from their own holdings, so that the small number of students do have reasonable access to course texts. Internet databases represent a growing resource for learning. There are few foreign language texts, most of them in English: only 10 foreign language books were purchased over the period 2006-2010. Student access to the scientific research literature available on line is limited. Due to the fast development of the research fields, a regular and broad update of scientific literature and study books, and access to peer-reviewed international journals is crucial for the education of the students. From the discussions with the teachers and the students, the wish for more literature was evident. They are fully aware of the financial restrictions and pleased that some strengthening of library resources does feature in the current procurement plans.

Professional practice is an essential component of the programme. The good relations developed over the long period that the Department has prepared specialists in hydrology and meteorology (since 1930) enable an excellent provision of professional practice placements, mainly but not only with the two principal social partners. These take place in the second year of the programme, in conjunction with research courses, and are greatly valued by all stakeholders in the programme. They often lead to employment opportunities.

### ***Main strengths and weaknesses***

#### ***Strengths***

Adequate classrooms, reading places and laboratory space for the programme's small class sizes. Any recent deficiencies are currently being rectified by refurbishment.

Secured funding for a current procurement process that is expected to strengthen teaching and learning equipment in the very near future.

Excellent professional practice opportunities.

#### ***Weaknesses***

Current funding for maintenance and regular replacement of equipment is inadequate.

Literature resources to support teaching and research in the rapidly developing subject field are poor.

### ***5. Study process and student assessment***

Admission requirements are centrally specified administered by the University. A bachelor degree in a wide range of geography, geology and environmental science study fields is a basic requirement. Thereafter performance in first-degree studies is the main contributor to the accumulation of a competitive points score that students may use in applications to as many as 20 programmes in the University. The total demand for entry to the programme has fallen significantly, from 36 to 25 over the 2006-2010 period, mainly through the lack of applicants for non state-funded places. The number of applicants selecting the programme as their first priority has, however, remained stable between eight and 11 over the same period. Between six and 13 students have been admitted each year, available places being nine to 13. Most applicants are from the University and most admissions are from the bachelor programme in hydrology and meteorology.

Students who graduate have numbered only four to seven. Of 49 students admitted from 2006-2010, 10 have terminated their studies. This dropout rate is of some concern, albeit that many of the reasons for leaving the programme are personal and beyond the remedial abilities of the programme managers. Some students do re-enrol, completing their studies in three rather than two years. Over the reporting period, only one student did not complete because of academic failure. Most students who prematurely leave the programme do so during the first semester; they are mainly students who have graduated in a bachelor programme other than hydrology and meteorology and who find the programme different and more difficult than they expected. The expert group would consider it imperative to review the admission procedures so as to minimise that reason for students leaving the programme; a programme where the numbers fall to as low as four cannot be sustainable in the long run.

The organisation of the study process ensures an adequate provision of the programme and the achievement of the learning outcomes. Classroom activities are evenly distributed during a week and over a semester. They are well balanced between lectures, seminars, and practical sessions. As far as possible they are timed to accommodate the majority of students who are also in employment. The SAR, however, indicates that there are situations where employment responsibilities have not harmonised with the programme schedule and students have left the programme. This would suggest to the assessment panel a need to ensure that, on admission, students have made arrangements with their employers to fit their schedule of work into the programme schedule. Given that 72 per cent of total study time is in independent work, including research, fitting the two schedules together should not be a major problem, although the combining of two workloads might be beyond some students' capabilities.

Students are provided with all necessary information about classes, aims and outcomes, subject requirements and the scheduling of assessments, learning practices and study papers, including the final thesis. The information is provided in a variety of ways and in a timely fashion. The main information source is the website. Additionally, continuous feedback between student and teacher is used formatively, to improve student performance and modify the teaching. The students who met with the expert group acknowledged they are kept well informed and are

content that what is delivered in the programme is what the information leads them to expect. Their workload is quite high but they offered no adverse comments about these arrangements.

Students carry out research as a large compulsory part of the programme. They are also encouraged to participate both in scientific activities outside the programme and in social activities. A few students are able to work with staff members on their research projects. One of the students who met with the expert group had presented a paper at science conference for which she received an award. Another student had already published a paper and was completing another. (It was noted that she had joined the programme from another university and was the only student present who had been involved in an ERASMUS exchange.) Many students are members of the very active Student Scientific Society of Natural Sciences. It organises seminars, debates, competitions, expeditions; shows self-produced documentaries and popular science films; and organises scientific sightseeing tours. The Society helps its members to deepen their knowledge in courses, seminars, conferences and preparing research papers; it also arranges students' interviews, develops academic links with schools and creates a network of young scientists. The Faculty organises a wide range of events for students to be able to meet and interact with teachers and social partners; some of the events also involve staff from other universities, in Lithuania and abroad, and graduates from the programme. All these activities heighten students' motivation and help to promote the excellent relations between staff and students that greatly impressed the expert group. They lie at the heart of the academic and social support the Department provides.

The University provides financial support in a number of ways. Scholarships reward certain academic successes or are directed to the social support of students with disabilities or other handicaps to study, such as serious illness or bereavement. Counselling and advisory services are available to help and guide students experiencing study difficulties. Despite all of these measures, economic and personal circumstances still lead to most of the student withdrawals referred to above.

Students have opportunities to participate in the ERASMUS exchange (student mobility) programme. Three students from the *Hydrometeorology* programme participated, two went to Bergen and one to Hamburg. No student came from abroad. The students who met with the assessment panel expressed interest in the ERASMUS programme but claimed to have been unsuccessful applicants.

The assessment of knowledge and achievement is by a variety of continuous, intermediate and final examination methods. They take mostly traditional written forms. University regulations govern eligibility to take a subject examination and if necessary retake it. Study subject documentation informs students about the assessment methods to be used. The assessment system appears to be well organised and equitable; it is clear, adequate and publicly available.

Specific procedures govern the preparation and submission of the final thesis. Students are well supervised by their teachers. The supervision system, involving close contact between supervisor and student, would appear to be a formative one. All theses receive a high grading, although in the view of the expert group, the general methodological and analytical standards of the theses are not as high as in comparable programmes in other European countries. The majority of them are rather of descriptive nature with simple graphs. The analysis of results, interpretation and discussion of results are often lacking. This despite the programme's implementation being linked to the *Bologna Declaration, 1999* (SAR, p. 8)

Over the period 2006-2010, 27 students graduated from the programme. 21 are currently in employment stemming directly from their specialty. Two others are doctoral students. The main employers of graduates from the programme are divisions of the Lithuanian Ministry of Environment, especially the Hydrometeorology Service. Most of the staff in the Service are graduates from the programme. In recent years the Service has taken two to four graduates from the programme and, in total, the Ministry of Environment has taken seven or eight. This would appear to be a stable demand. Many graduates hold leading scientific or managerial positions in the Ministry's various divisions. Other employers whose activities include weather and water monitoring and climate change take a few graduates every year; their demands would appear to be increasing. Here are included such institutions as the Environmental Protection Agency, Vilnius airport, the Marine Research Centre, water companies, energy companies and various non-governmental agencies. Graduates from both of the Department's programmes also seem to have the training and general skills to gain employment in the modern graduate labour market. Employers and graduates all expressed appreciation of the knowledge and skills that students acquired during the programme. Hence, the professional activities of the majority of graduates meet the programme providers' expectations.

### ***Main strengths and weaknesses***

#### ***Strengths***

A good range of well-integrated studies leading to an appropriate array of specialisms.

The enthusiasm of a well-qualified staff; and appreciation by graduates of the skills they had acquired in the programme.

A wide range of academic activities promote the excellent staff-student relations that lie at the heart of the Department's academic and social support of students.

The progression of almost all graduates into subject-related employment or further studies. .

#### ***Weaknesses***

Poor participation of students in mobility programmes.

Theses that appear to be over marked, being rewarded by high grades for works of a low standard by comparison with theses in other European institutions.

## ***6. Programme management***

It is a well-prepared and presented self-assessment report. Its quality and size indicates an enormous amount of work and shows that the quality assurance exercise has been taken seriously. Information on the program implementation is collected and analyzed regularly involving teaching staff, students, stakeholders, employers and other social partners. The outcomes of external evaluations carried out in 2001 were used for the improvement of the programme. The internal quality assurance measures are effective and efficient. The responsibilities for decisions and monitoring of the implementation of the programme are clearly allocated.

Operating within the regulatory framework of the State, programme management is at three levels: University, Faculty and Department. Responsibilities for internal regulation, decisions and monitoring of the implementation of the programme are clearly allocated. Operational control and direct responsibility for implementing the programme are with the Department. Here

the Head, the staff and the programme committee deal variously with matters that include organisation of the study process; provision of facilities and learning resources; improvement of study quality; allocation of teaching loads; changes of curriculum, subject preparations and descriptions; relations with social partners; and confirmation of supervisors for theses and research papers. Programme management is generally effective; the exception has been the inability to secure adequate funding for the regular periodic upgrading of facilities and learning resources. That is doubtless a problem that pervades the University and it is to be hoped that the recent acquisition of European funds will improve matters.

The evaluation and improvement processes involve stakeholders. Students are represented on the programme committee and on the Faculty council. Social partners are also represented on the committee; they play an important advisory role there and in their contacts with staff and students in events organised by the Department. Employers and alumni who met with the assessment panel expressed their appreciation of the good relations that prevail with social partners and their ability to be heard in discussions about programme enhancements.

Internal quality assurance procedures are efficient and generally effective. All bodies involved at the various levels have clear monitoring and reporting responsibilities. The general system is based upon European Regulations for internal study quality assurance; the so-called 'Dublin descriptors' or guidelines; UK guidelines for geographical studies; and guidance from the Lithuanian Centre for Quality Assessment in Higher Education. The periodic surveys of study disciplines and teaching quality are an important part of the process. Other information is regularly gathered from teaching staff, employers and other social partners.

Analysis of regularly gathered information underpins the improvement process. Lessons learned from internal surveys lead, after due process, to programme improvements. The outcomes of external evaluations carried out in 2001 were used to improve the programme. An internal assessment carried out in 2005 led to no changes but already, the SAR incorporates pointers to improvements that will have been prompted by the current evaluation. The use that has been made of the outcomes of internal and external evaluations is evidence to the expert group of the programme management's responsiveness to the needs for change and willingness to identify and implement improvements.

### ***Main strengths and weaknesses***

#### ***Strengths***

The involvement of stakeholders in the Department's programme management.

The design and operation of the internal quality assurance system to align with international standards.

The willingness to apply the results of internal and external evaluations to improve the programme.

### III. RECOMMENDATIONS

1. Review the curriculum, to add more English language teaching and to enhance the representation in the programme of the study field's latest international achievements in science and technology.
2. Take whatever steps are required to raise the level of international scientific activity, research and publication and hence raise the Department's and the programme's international visibility, with the added impact of improving the programme's scientific content to include newer research fields. These could also be relevant to reviewing the standard of student theses, to bring them more in line with standards elsewhere in Europe.
3. Make haste with the renewal and upgrading of computing, laboratory and field equipment and of learning resources.
4. Encourage and foster more student international mobility.
5. Take steps to secure internal financial support to operate and maintain equipment purchased with the aid of external funding.

#### IV. GENERAL ASSESSMENT

The study programme Hydrometeorology (state code – 621F83001) is given **positive** evaluation.

*Study programme assessment in points by fields of assessment.*

| No. | Evaluation Area                                                                                          | Evaluation Area in Points* |
|-----|----------------------------------------------------------------------------------------------------------|----------------------------|
| 1.  | Programme aims and learning outcomes                                                                     | 4                          |
| 2.  | Curriculum design                                                                                        | 3                          |
| 3.  | Staff                                                                                                    | 3                          |
| 4.  | Material resources                                                                                       | 3                          |
| 5.  | Study process and assessment (student admission, study process, student support, achievement assessment) | 3                          |
| 6.  | Programme management (programme administration, internal quality assurance)                              | 4                          |
|     | <b>Total:</b>                                                                                            | <b>20</b>                  |

\*1 (unsatisfactory) - there are essential shortcomings that must be eliminated;

2 (satisfactory) - meets the established minimum requirements, needs improvement;

3 (good) - the field develops systematically, has distinctive features;

4 (very good) - the field is exceptionally good.

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