



ANNUAL REPORT 2018

FACULTY OF FORESTRY AND WOOD SCIENCES CULS PRAGUE



Czech University of Life Sciences Prague

Faculty of Forestry
and Wood Sciences

Faculty of Forestry and Wood Sciences
Czech University of Life Sciences Prague
Annual Report for the Year 2018



Introduction

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1 Introduction

The year 2018 was a significant year as we were commemorating 100 years since the declaration of independence of Czechoslovakia. It also proved to be an important milestone in the life of the Faculty with regards to the overall situation in Czech forests and the need to participate as a major scientific and educational institution in the third role of universities/faculties – affecting the life of the society. Unfortunately, the forecasts voiced by the scientists from our Faculty, drawing attention to mistakes and discrepancies in the Czech forest management, came fully true. The consequences of unresolved issues which the leading representatives of the practice denied to see were fully revealed. Although the voice of the academic realm is becoming louder, the Ministry of Agriculture still does not consider it as the most important one. This is despite the fact that our Faculty has a sufficient scientific and professional potential fully capable of preparing strategies and concepts for further development of forestry and wood sciences in the Czech Republic, which is what we strived for also in 2018.

In 2018, our Faculty continued streamlining its organisational structure, when integrating Wood Technology branches into one centre. A considerable emphasis was placed on the integration of two organisational units – the Centre of Excellence for Mitigation, and the Centre of Excellence EVA4.0 – into the Faculty structure. In the area of education, the year 2018 saw our outstanding achievements – acquisition of institutional accreditation for Forestry and Wood Technology, and subsequent accreditation of 16 new pre-graduate and PhD study programmes. We consider it important to complement the educational structure of the Faculty in the segment of the use of wood as a renewable raw material. The support of talented students keeps steadily growing with the number of paid merit scholarships tripling as against 2014.

The publication focus in the area of science and research is being reformed. It is our priority to publish in high-quality journals, including articles in the Nature Index journals. It is vital that the new organisational units with success participate in publishing of excellent research results. The amount of funds invested into science and research increased noticeably in 2018. The High-tech Pavilion with both educational and research capacity was completed and laboratories whose facilities are covering areas of hundreds of m² were reconstructed to serve one of the two strategic Faculty projects.

Our international relations were developing remarkably. Not only is the number of incoming and



outgoing students rising constantly but also the most prominent professors from around the world come and give lectures at our Faculty. The total support of staff trips abroad amounted to CZK 5 million. This all contributes to intensive cooperation with international organisations and a striking increase in the number of submitted applications for international projects.

The year 2018 may be also assessed favourably in terms of an increase in the headcount. The predominant factor allowing for this was the EVA4.0 project for which we recruited more than 30 new staff members. The salaries financing structure used for all the staff members thus became multi-source to even a greater degree. This, to a large extent, eliminated the risk of a single financing source failure, and provided for further salary hiking. The Marketing Department plays a major role in presenting the life of the Faculty by creating its positive image.

In 2018, the Faculty continued to pursue the strategy for enhancing its importance as a stakeholder in the real life situation of forestry and wood sciences. We want the Faculty to take part in the preparation of conceptual materials and strategies and their implementation. The greatest issue of the existing Czech forestry is its excessive conservatism, i.e. restricting of forestry activities by nonsensical regulations devised for conditions other than the ones we are experiencing now. Unwillingness to accept the opinions of the academic realm, resistance to introduction of results based on science, and preferring of simple and comprehensible “solutions” from practitioners and “pseudo-scientists” is still an everyday reality. Such simplistic solutions substitute the real and permanent system of life-long education. Unfortunately, such distorted facts are pleasing especially for the current model of management and financial flows and represent thus the greatest hindrance to any change. And such change is what we need to work on also in 2019.

prof. Ing. Marek Turčáni, PhD.
Dean of the Faculty



Česká zemědělská univerzita v Praze
**Fakulta lesnická
a dřevařská**

Basic Data



Czech University of Life Sciences
**Faculty of Fore
and Wood Sci**

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Česká zemědělská univerzita v Praze
**Fakulta lesnická
a dřevařská**

2 FFWS basic data

Full name and address of the Faculty

Full name

Fakulta lesnická a dřevařská
České zemědělské univerzity v Praze

Faculty address

Czech University of Life Sciences in Prague
Faculty of Forestry and Wood Sciences
Kamýcká 129
Postal code 165 00 Prague 6 – Suchdol

English translation of the name of the Faculty

Faculty of Forestry and Wood Sciences
Czech University of Life Sciences Prague

Commonly used abbreviations

FLD ČZU (in Czech)
FLD (in Czech)
CULS FFWS (in English)
FFWS (in English)

Composition of the Scientific Board, Academic Senate and other FFWS bodies

FFWS Academic Senate

Academic staff:

doc. Ing. Oto Nakládal, Ph.D.
prof. Ing. Jaroslav Červený, CSc.
doc. Ing. Ivana Tomášková, Ph.D.
doc. Ing. Vítězslava Pešková, Ph.D.
Priv. -Doz. Peter Surový, PhD.
doc. Ing. Milan Gaff, PhD.
doc. Ing. Vlastimil Hart, Ph.D.
Ing. Václav Bažant, Ph.D.

Students:

Ing. Radim Löwe
Ing. Monika Sedmíková
Ing. Lucie Hambálková
Ing. Jan Rohla

FFWS Advisory Board

Internal members – FFWS staff:

Prof. Ing. Marek Turčáni, PhD., Chairman
Prof. Ing. Jaroslav Červený, CSc.
doc. Ing. Milan Gaff, PhD.
doc. Ing. Miroslav Hájek, Ph.D.
doc. Ing. Vlastimil Hart, Ph.D. (appointed member as of 24 April 2018)
Prof. Ing. Jaroslav Holuša, Ph.D.
doc. Ing. Tomáš Kušta, Ph.D.
Prof. Ing. Milan Lstibůrek, MSc., Ph.D.
Prof. Ing. Róbert Marušák, PhD.
doc. Ing. Vítězslava Pešková, Ph.D.
Prof. Ing. Vilém Podrázský, CSc.
doc. Ing. Jiří Remeš, Ph.D.
Priv. Doz. Ing. Peter Surový, PhD.
Prof. Ing. Miroslav Svoboda, Ph.D.
Prof. Ing. Luděk Šišák, CSc.
doc. Ing. Ivana Tomášková, Ph.D.

Internal members – remaining CULS faculties and departments:

doc. Ing. Martin Hanel, Ph.D. (appointed member as of 24 April 2018)

doc. Ing. Václav Hejnák, Ph.D.
doc. Ing. Milan Houška, Ph.D.
doc. Ing. Bohdan Lojka, Ph.D.
doc. Ing. Václav Malík, Ph.D. (membership terminated as at 24 April 2018)
doc. Ing. Jiří Mašek, Ph.D.
prof. Ing. Petr Sklenička, CSc. (membership terminated as at 24 April 2018)

External members:

Ing. Jiří Boháček
PhDr. Robin Böhnisch (appointed member as of 6 October 2018)
Prof. Dr. Ing. Libor Jankovský, CSc. (appointed member as of 24 April 2018)
Prof. RNDr. František Kačík, Ph.D.
doc. Ing. Radomír Klvač, Ph.D. (membership terminated as at 24 April 2018)
doc. RNDr. Bohumír Lomský, CSc. (membership terminated as at 6 October 2018)
Ing. Ľudmila Marušáková, Ph.D.
Prof. RNDr. Ing. Michal V. Marek, DrSc., dr. h. c.
Prof. Dr. Ing. Viliam Pichler
Ing. Petr Pražan, Ph.D.
Ing. Daniel Vlkanova, Ph.D., MBA
Ing. Josef Vojáček
doc. Ing. Petr Zahradník, CSc.
Ing. Martin Žižka, Ph.D.

Management of the Faculty of Forestry and Wood Sciences

Dean:

Prof. Ing. Marek Turčáni, Ph.D.

Vice-Deans:

Prof. Ing. Róbert Marušák, PhD., First Vice-Dean, Vice-Dean for International Relations
doc. Ing. Jiří Remeš, Ph.D., Vice-Dean for Education (until 31 January 2018)
Ing. Jan Kašpar, Ph.D. Vice-Dean for Education and Quality (as of 1 February 2018)
doc. Ing. Tomáš Kušta, Ph.D., Vice-Dean for Science, Research and Doctoral Study
Ing. Radek Rinn, Vice-Dean for Development and Operational Programmes

Head of Dean's Office:

Ing. Bc. Martin Prajer, Ph.D.

Organisational structure of the FFWS

Department of Forest Ecology

Publishing of several articles in prestigious scientific journals, e.g. *Global Change Biology* or *Nature Communications*. Presenting of results in the public domain through articles in newspapers or interviews on public TV or radio.

Department of Silviculture

Active involvement in CFS activities (3 workshops, 4 forestry evening events) and also activities of CAAS, KRNP, and SNP Board. Holding of a course for SAIF. Acquiring of 3 new NAZV projects with co-financing.

Department of Genetics and Physiology of Forest Trees

Holding of 2 international EvolTree workshops. Establishing of cooperation with the University of Eastern Finland and INRA. Publishing in prestigious journals *Remote Sensing of Environment*, *Genetics*, *New Phytologist*, *Scientific Reports*, etc.

Department of Forest Protection and Entomology

Organising of 2 specialised lectures for forest operation staff, acquiring of 2 projects, presenting 4 times on TV, participating in an international summer school in Sweden, and holding a lecture for FRS.

Department of Forest Management

Holding of the international IUFRO conference and the workshop "Forests Unmanned" for professionals, and concentrating on the development of international cooperation in remote sensing, namely with SLU in Umeå, NMBU in Ås, BOKU in Vienna.

FFWS Arboretum in Kostelec nad Černými lesy

During a rather successful season with a remarkable number of visitors, acquiring of a subsidy for building of a nature trail through model wetland habitats, and several new instruments and pieces of equipment from the Faculty funds.

Department of Forestry Technologies and Construction

Issuing of the "Proposed Rules for Electronic Timber Registration by Harvesters" under the QJ1520005 research task financed by NAZV. On 12 November 2018, founding of the CZ Platform for Bioeconomy.

Department of Forestry and Wood Economics

Successful defending of a NAZV project and obtaining of 2 new projects for the coming years. Participating in the EFI ENGAGING project implementation. Organising of a professional programme for students and teachers from the University of Padova; biannual preparing of the meeting of the CAAS Forestry Economic Committee.

Department of Game Management and Wildlife Biology

Obtaining of a NAZV grant, accepting of 2 new postdocs (Poland and Ukraine), holding of a summer school in SAR, equipping of the Department with new study aids, and presenting in various media 47 times.

Department of Wood Processing and Biomaterials

It was created by merging of 2 departments: the Department of Wood Processing and the Department of Wood Products and Wood Constructions.

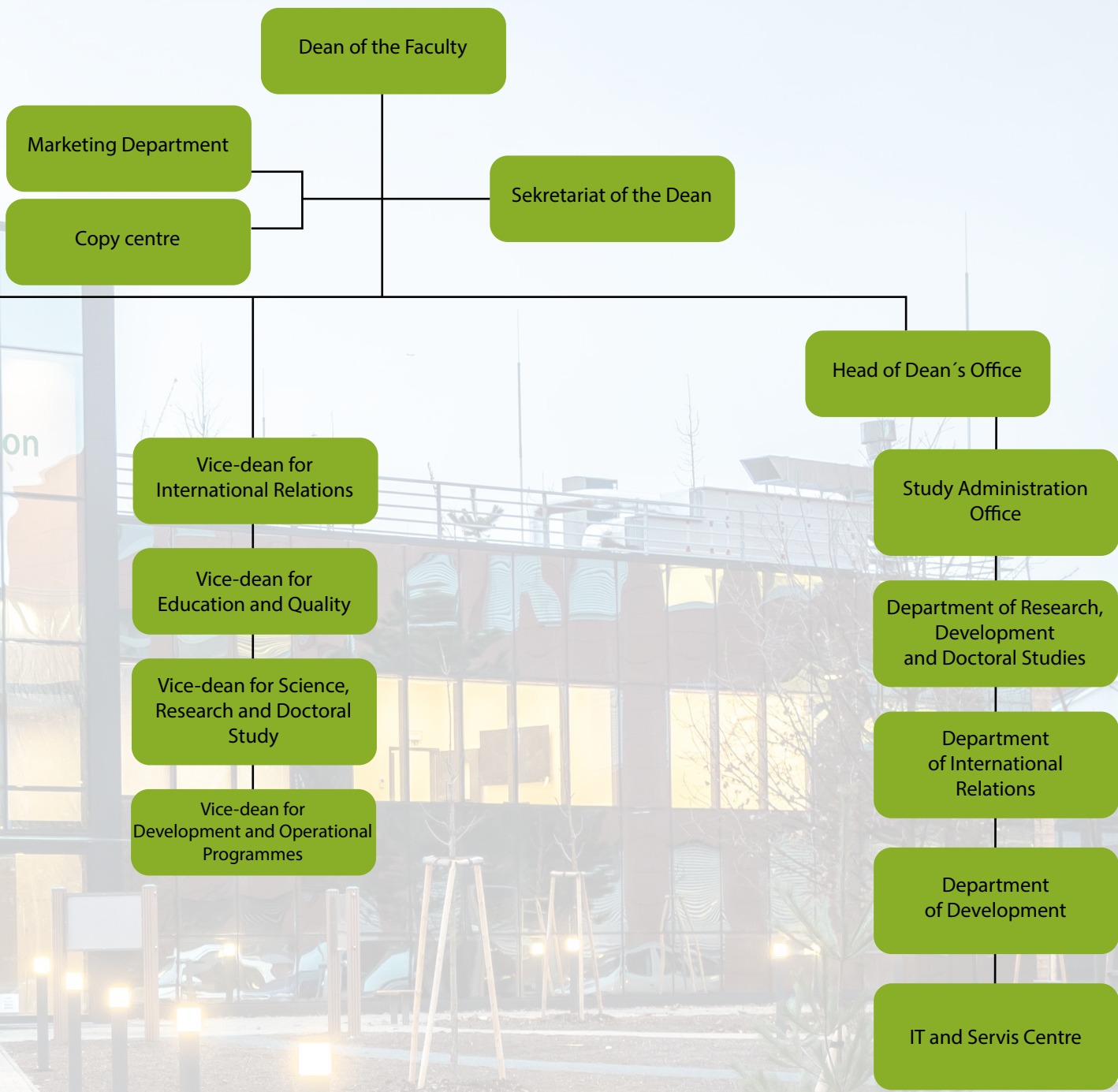
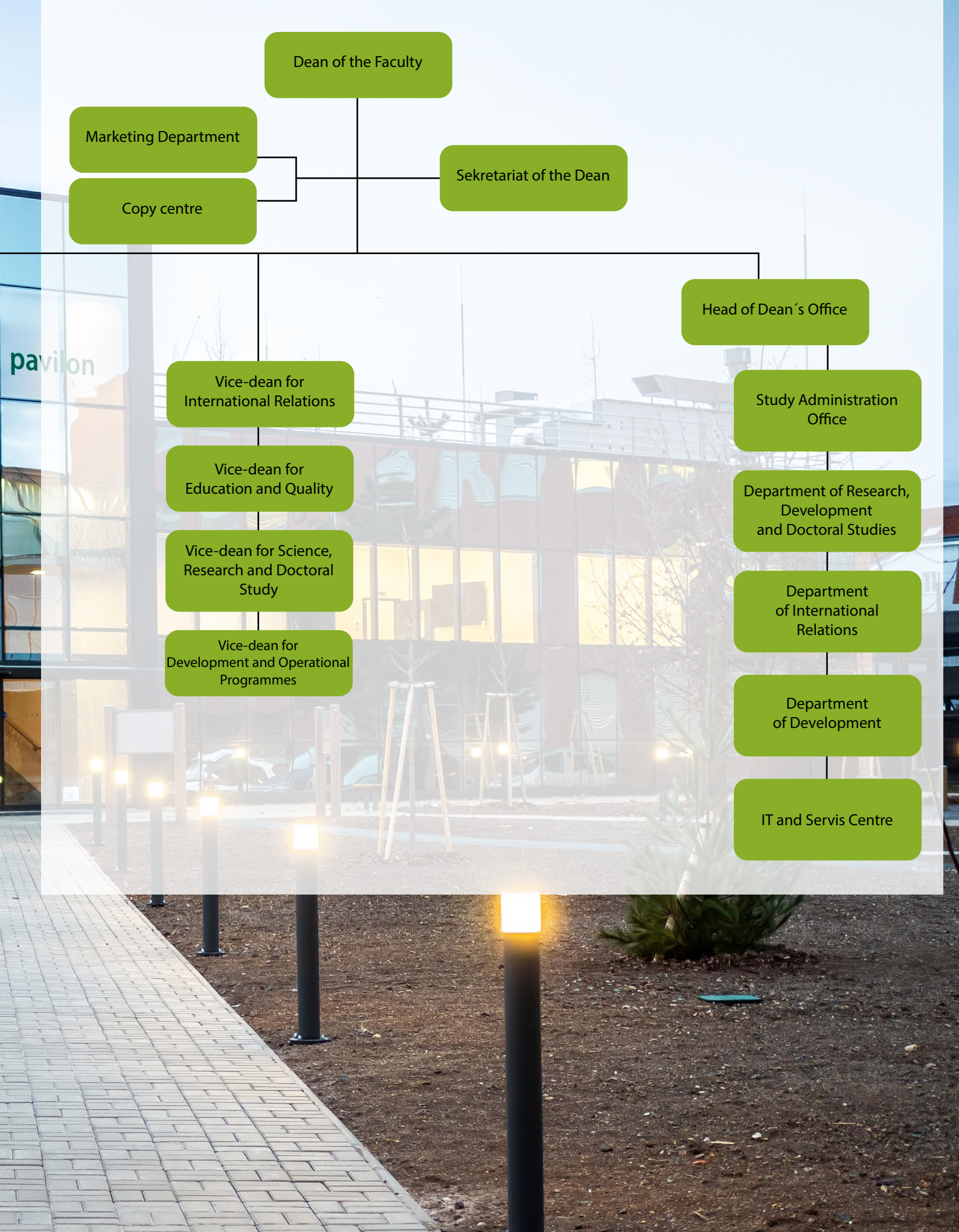
Participating in 2 NAZV projects, 1 GA CR project, and 1 TA CR project. Submitting of 2 international projects under HORIZON 2020. Admitting of 1 foreign postdoc (India) and 4 foreign PhD students (Iran, India and Italy). Publishing of several books and study texts.

Excellent team for mitigation of climate change

Building of a new genetic laboratory for bark beetle research. Full operation of the Laboratory for Chemical Ecology of Insects was assured. ETM was granted 3 NAZV major projects, which complement the implementation of the EXTEMIT-K project.

Excellent team EVA4.0

Preparing, full reconstructing, and building of laboratories for 5 out of 10 sub-projects under the EVA4.0 project. Developing of good-quality publishing activities, resulting in publishing of 2 articles in the *Nature Index* journals.





GALILEO workshop



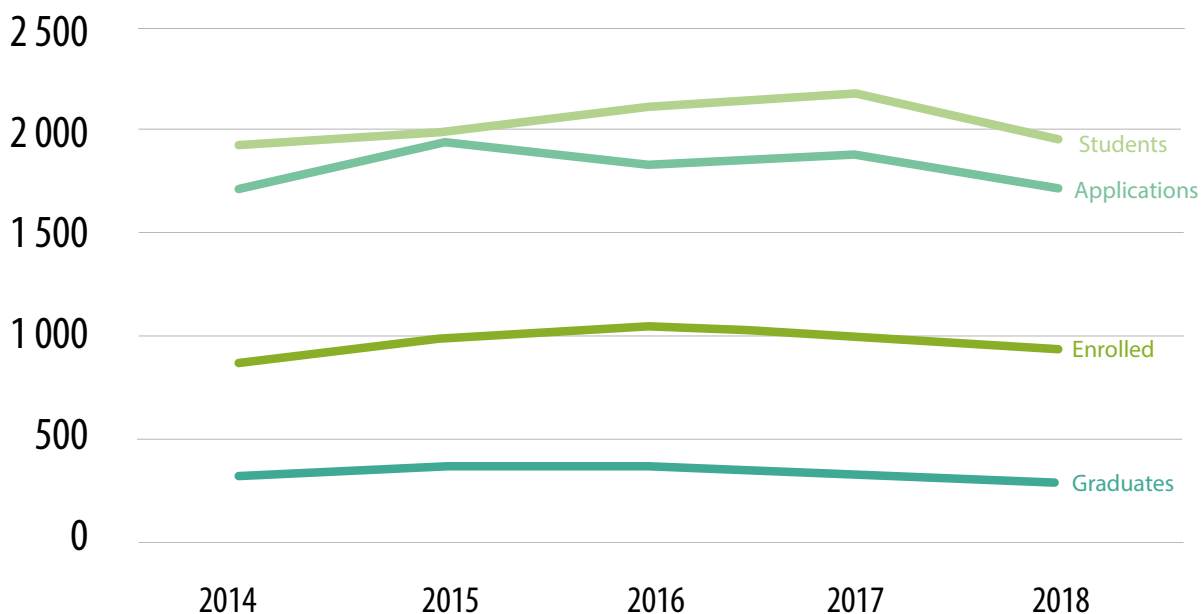
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Educational activities

3

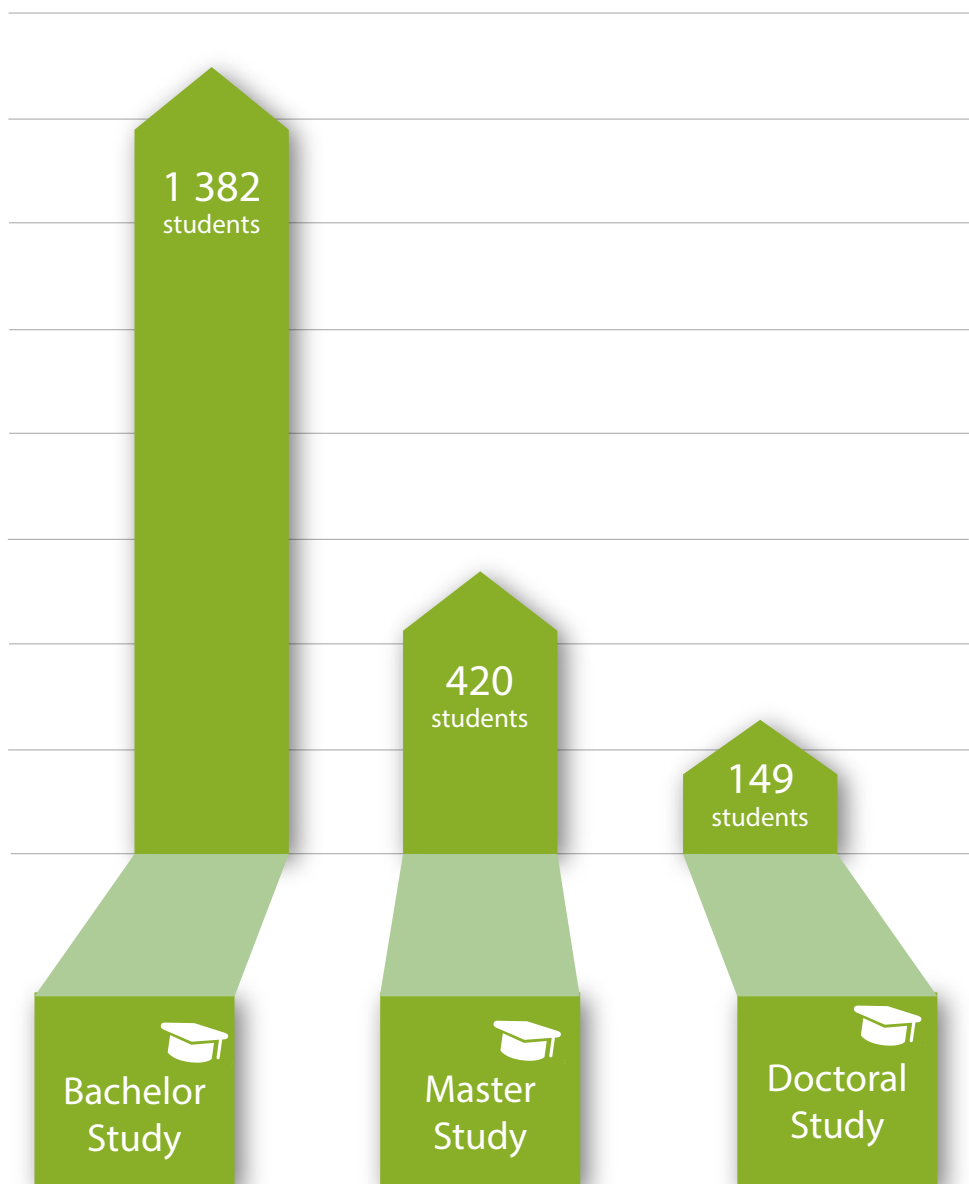
3 Educational activities

On a long-term basis, the FFWS systematically enhances all three university roles – educational, scientific and social. **At the end of 2018, the CULS acquired institutional accreditation, inter alia, for Forestry and Wood Technology courses provided mostly by the FFWS. All the three degrees of study have been granted the accreditation for 10 years – the maximum possible length. In this way, the long-term target, which will allow for a remarkable increase in education quality, has been achieved.**



In line with the recommendation of the Ministry of Education, Youth and Sports of the Czech Republic, the FFWS has been applying a long-term strategy in order to gradually decrease the number of FFWS students, which will enable the Faculty to make study groups smaller, implement modern teaching methods in education, and enhance the students' academic performance. Out of all the applications submitted for Bachelor's and Master's study programmes in 2018, **902** students were admitted of which **894** were subsequently enrolled. In 2018, there were 47 applicants admitted for PhD study programmes of which **42** students were then enrolled.

The acquisition of institutional accreditation has been reflected mainly by the structure of study programmes (SP). The existing study programmes have been updated and new ones have been outlined with the aim to respond to social as well as natural changes of recent decades.



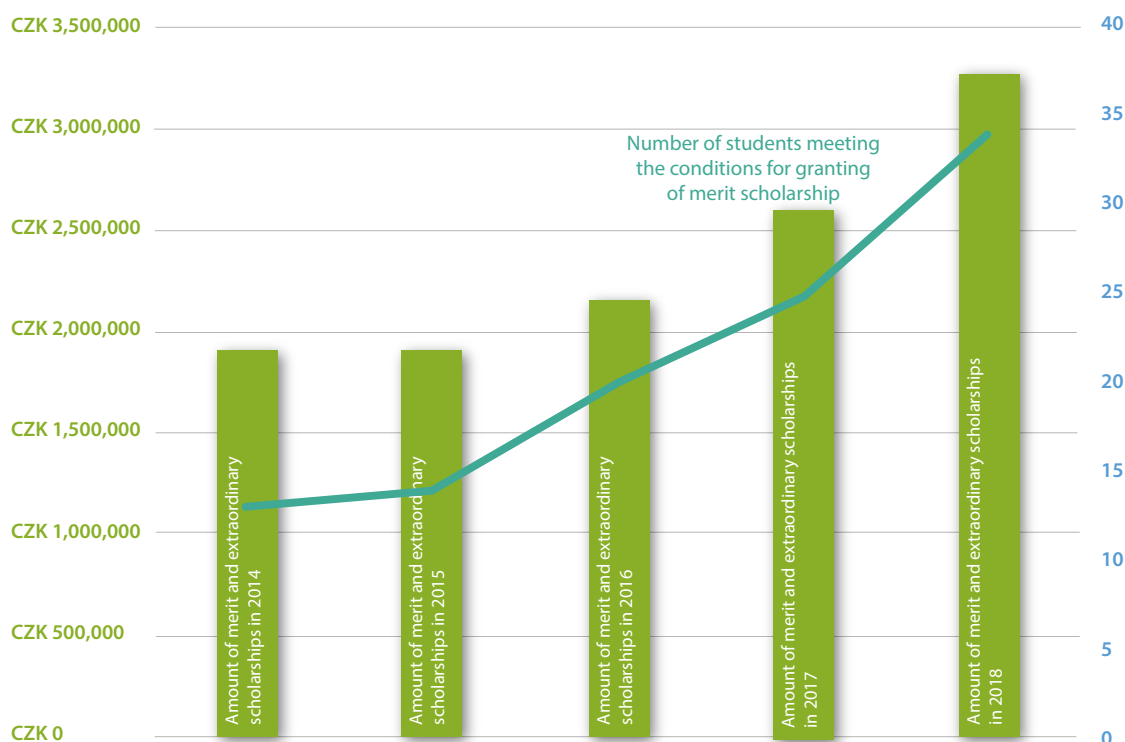
As at 31 October 2018, **1,951 students** were studying in all study programmes at FFWS.

280 students in Bachelor's study programmes (145) and Master's study programmes (135) successfully completed their studies in 2018. As regards doctoral study programmes, 8 students completed their studies successfully.

PRACTICE-ORIENTED EDUCATION

One of the steps leading to enhancement of the education performance is a high proportion of practice-oriented education thanks to which students' practical skills are developed together with broad theoretical knowledge, which give the students a good starting position. Both collective and individual practical training sessions with minimum duration of 3 weeks are included nearly in all Bachelor's and Master's study programmes. Overall, 446 students took part in those in 2018. The greater proportion of practice-oriented education has been also reflected by updating of curricula of newly accredited study programmes in connection with new facilities available in the new High-tech Pavilion.

FUNDS TO SUPPORT TALENTED STUDENTS rise every year in line with a long-term strategy



EMPLOYABILITY OF GRADUATES

Employability of graduates is a significant aspect in assuring the quality of educational process at the entire FFWS.



On a long-term basis, employability of our graduates has been high, exceeding **99%**.

It means that only a few individuals fail to find a job within 1 year after graduation.

SOCIAL AND AWARENESS ROLE OF THE FACULTY

The FFWS is aware of its social significance and is obliged to positively influence and educate the society beyond its study programmes. Our staff members are engaged in the preparation of strategic forestry documents. In 2018, e.g., they participated in drawing up of supporting materials for the strategy to fight the bark beetle, and an amendment to the decree on regional plans of forest development and delimitation of management sets of stands. Faculty staff members are also members of numerous specialised committees and other advisory bodies whether reporting to the General Manager of Lesy ČR, s. p. or to the Minister of Agriculture, etc. The FFWS is aiming at fulfilling its social role as a university by organising courses of the University of the Third Age. Dozens of attendees take part in such courses every year.



Bachelor's study programs

Master's study programs



Forest and tree management as an integral part of human existence and an important ecosystem that significantly absorbs CO₂ from the atmosphere.

Forestry (Czech/English)

- Forest ecosystems protection and silviculture
- Economics and management of forestry

System arboristics (Czech)

Operation and Game management (Czech/English)

Conservation of natural objects and taxidermy (Czech)

Forest Engineering (Czech/English)

Forestry, Water and Landscape Management (English)

Tropical Forestry and Agroforestry (English)



Wood processing as a significant renewable energy and building resource.

Wood Technology (Czech/English)

- Wood processing
- Business in woodworking and furniture industry

Wood Engineering (Czech/English)



Long-term storage of CO₂ in timber structures and wood products that enhance the quality of human life.

Timber Constructures and Structures Based on Wood (Czech)

Doctoral 's study programs

Forest Biology (Czech/English)

**Forest Management
(Czech/English)**

**Forest Protection and Game
Management (Czech/English)**

**Applied Geoinformatics
and Remote Sensing in Forestry
(Czech/English)**

**Wood Processing
and Forest Machinery
(Czech/English)**

**Economics and Management of an Enterprise
(Czech/English)**

**Global Change Forestry
(English)**

**Fire Protection of Forest, Timber and Wood-Based
Materials (Czech/English)**



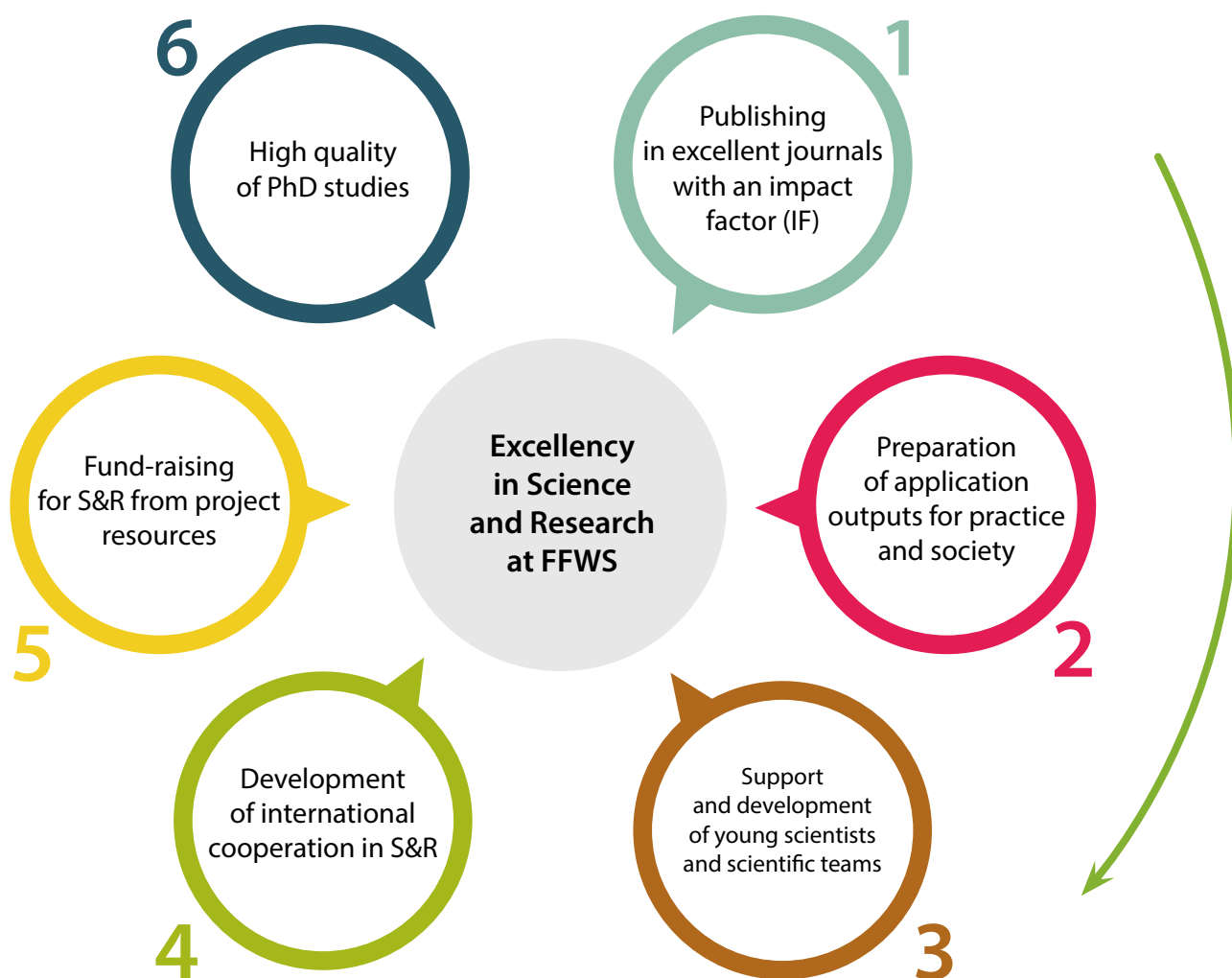
Science and Research

4

4 Science and Research

The main activities of the FFWS in S&R were strategically aimed especially at intensive promotion of excellent science, which is of top priority in terms of Faculty's philosophy in line with the Update of the Long-term Plan. For the main priorities in S&R see the chart below.

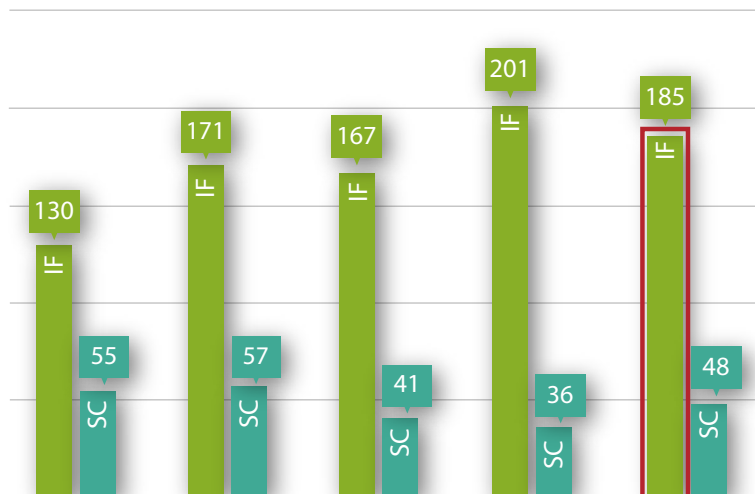
All the below presented facts, figures and graphic development data confirm that the Faculty keeps pursuing a positive trend both in S&R and building of an excellent scientific and research centre. With intensive support of the FFWS, e.g., high quality of publication activities of the entire Faculty has been retained with a focus on high-quality publication outcomes often published in the best journals in the field. With regards to its long-term objectives, the FFWS also continued supporting young scientists and scientific teams, and enhancing the quality of PhD studies.



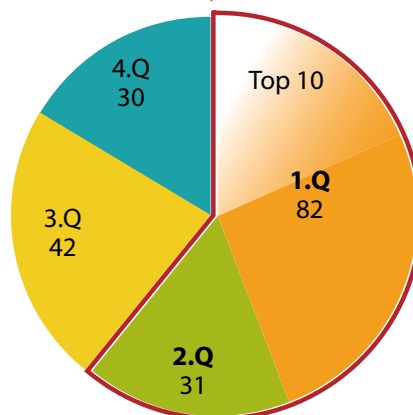
PUBLISHING IN EXCELLENT JOURNALS WITH AN IMPACT FACTOR (IF)



Development of the number of articles in journals with an IF over the last 5 years



Quartile-based results over the last year



More than 60% in the 1st and 2nd Q on WoS

Articles in the Nature Index

Nature Communications

Niina Irina Kuosmanen

Proceedings of the National Academy of Sciences of the United States of America

Tomáš Černý

Nature Communications

Tiphaine Després,
Tomáš Hlásny
Miroslav Svoboda

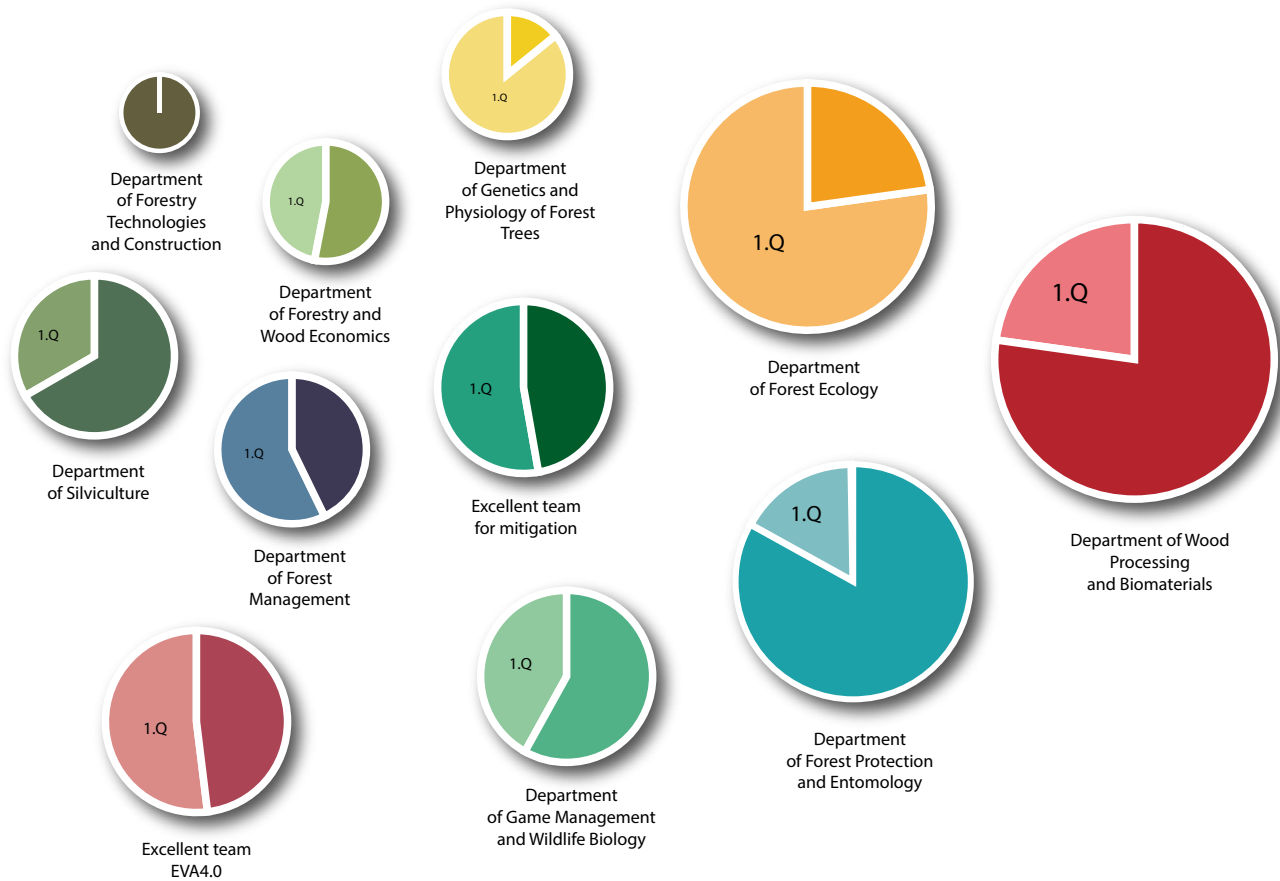
Current Biology

Thomas Bourguignon,
Jan Šobotník

A significant share of the FFWS in creative activity in the area of forestry and wood technology in the Czech Republic in 2018.

In 2018, the FFWS published 42 articles in the Forestry category and 29 articles in the Materials science, Paper and Wood category. **Out of the total number of outputs on the WoS with authors from all the institutions in the Czech Republic the Czech University of Life Sciences in Prague placed first in the Forestry category as well as in the Materials science, Paper and Wood category (with 48 and 29 publications in total, respectively).**

Publishing activities of the departments



The circle size represents the percentage of the given department's publications out of the total number of FFWS publications with an IF.

PREPARATION OF PRACTICE-BASED AND SOCIETY-ORIENTED PUBLICATION OUTPUTS

○²

Over 2018, the number of created outputs, which were not subject to bibliometric evaluation, amounted to 91.

OUTPUTS NOT SUBJECT TO BIBLIOMETRIC MEASURING*

2018

5 books

2 utility models

9 chapters in a book

3 functional samples

4 types of software

Film „The World According to Termites“

8 certified methodology documents

**Selection from all 91 outputs*



The World According to Termites

2018

92% user rating on CSFD

1st place at the prestigious Wildlife Vaasa International Nature Film Festival in the Science category

SUPPORT AND DEVELOPMENT OF YOUNG SCIENTISTS AND SCIENTIFIC TEAMS

○³

In 2018, calls were invited to support:

- projects with excellent outputs,
- excellent teams,
- participation in international consortia.

4

DEVELOPMENT OF INTERNATIONAL COOPERATION IN R&D

We gradually broaden **our cooperation with institutions abroad**. Whereas in 2015 there were 82 publications with foreign cooperation, **in 2018, there were already 102**.

SUSTREE

(Interreg CENTRAL EUROPE)

– leading partner: BFW in Vienna

Silva Gabreta Monitoring

(Cross-border cooperation programme between the Czech Republic and the Free State of Bavaria)

– leading partner: Bavarian Forest National Park

Cross-border Mapping of Forest Ecosystems

(Cross-border cooperation programme between the Czech Republic and the Free State of Bavaria)

– leading partner: Šumava National Park

FORHEAL

(ERASMUS+)

– leading partner: University of Helsinki

FORSCEE

(EFI Network Fund)

– leading partner: BOKU Vienna

Future environmentalists (ERASMUS+)

– leading partner: Association of Parks in Bulgaria

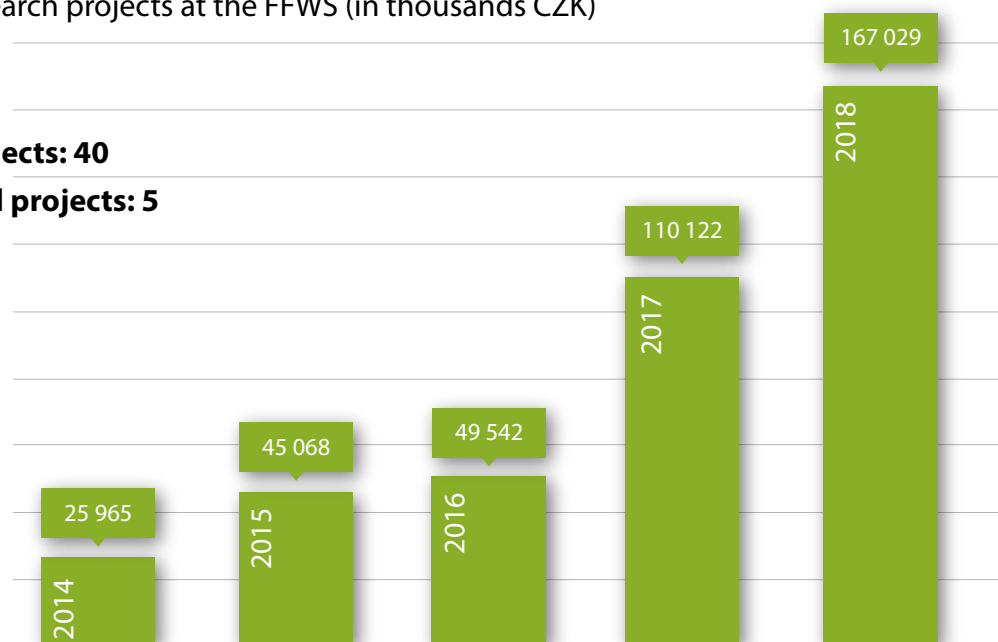
5

FUND-RAISING FOR R&D FROM PROJECT RESOURCES

Funds from domestic research projects at the FFWS (in thousands CZK)

Number of national projects: 40

Number of international projects: 5



HIGH QUALITY OF PhD STUDIES



In 2018, the CULS acquired **institutional accreditation for Forestry and Wood Technology courses for PhD study programmes**, provided mostly by the FFWS, for the maximum possible period of 10 years.

DOCTORAL STUDY

2018

111 full-time students

28 part-time students

37 foreign students
(11 from Slovakia)

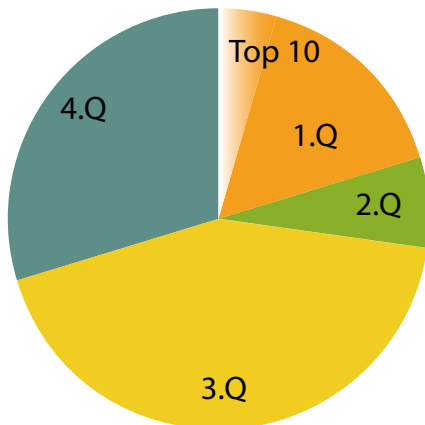
8 successfully defended
doctoral theses

NEWLY ACCREDITED PhD STUDY PROGRAMMES

Global Change Forestry

Applied Geoinformatics and
Long-distance Earth Exploration in
Forestry

Forest, Wood and Wood-based Mate-
rials Fire Protection



DOCTORAL STUDY

2018

67 outputs on WoS
-- In 45 outputs, PhD students
are listed in the first place among
the authors

Scholarship in CZK Development of scholarships granted to PhD students



MEASURES TO ENHANCE QUALITY

- Introduction of keeping of records of PhD students' activities
- Regular review of publication activities by means of publishing plans
- Thorough evaluation of students' activities at the end of the first year
 - defence of activities before a committee
- Holding of foreign experts' lectures
- Mandatory internships abroad
- Top-class laboratory equipment and instruments

SUPPORT OF STUDENTS FROM SPECIFIC RESEARCH RESOURCES IN 2018

IGA

2018

Drawing of
CZK 6,014,000

44 projects
supported

PhD students:
63

CIGA

2018

Drawing of
CZK 4,572,000

16 projects
supported

PhD students:
61

QUALIFICATION ESCALATION

- In 2018, there was 1 successful habilitation process.
- In 2018, there was no professorship process.
- Three graduates who successfully completed their doctoral studies were employed.

Evaluation specifications regarding the qualification of applicants for habilitation processes and professorship processes were introduced at the CULS FFWS in Prague.



Internationalisation

5

5 Internationalisation

The activities of the Faculty in the area of internationalisation resumed the existing efforts of the Faculty leading to improvement of studies and teaching, activities in international organisations, and communication with foreign institutions aimed at seeking new strategic partners abroad to enrich the pedagogic, scientific and research activities. These areas have been tackled through the mobility of staff and students, activities in international organisations, and bilateral agreements with strategic partners.

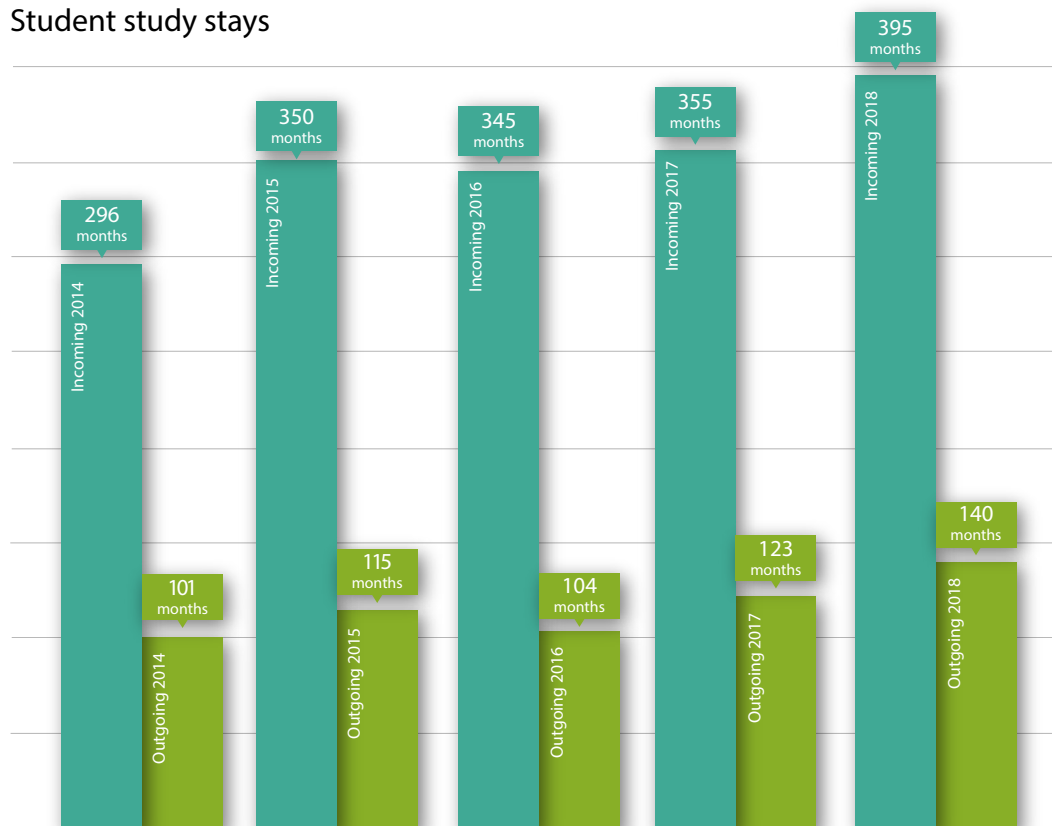
STUDENT MOBILITY

2018

63 bilateral contracts with universities from 22 countries

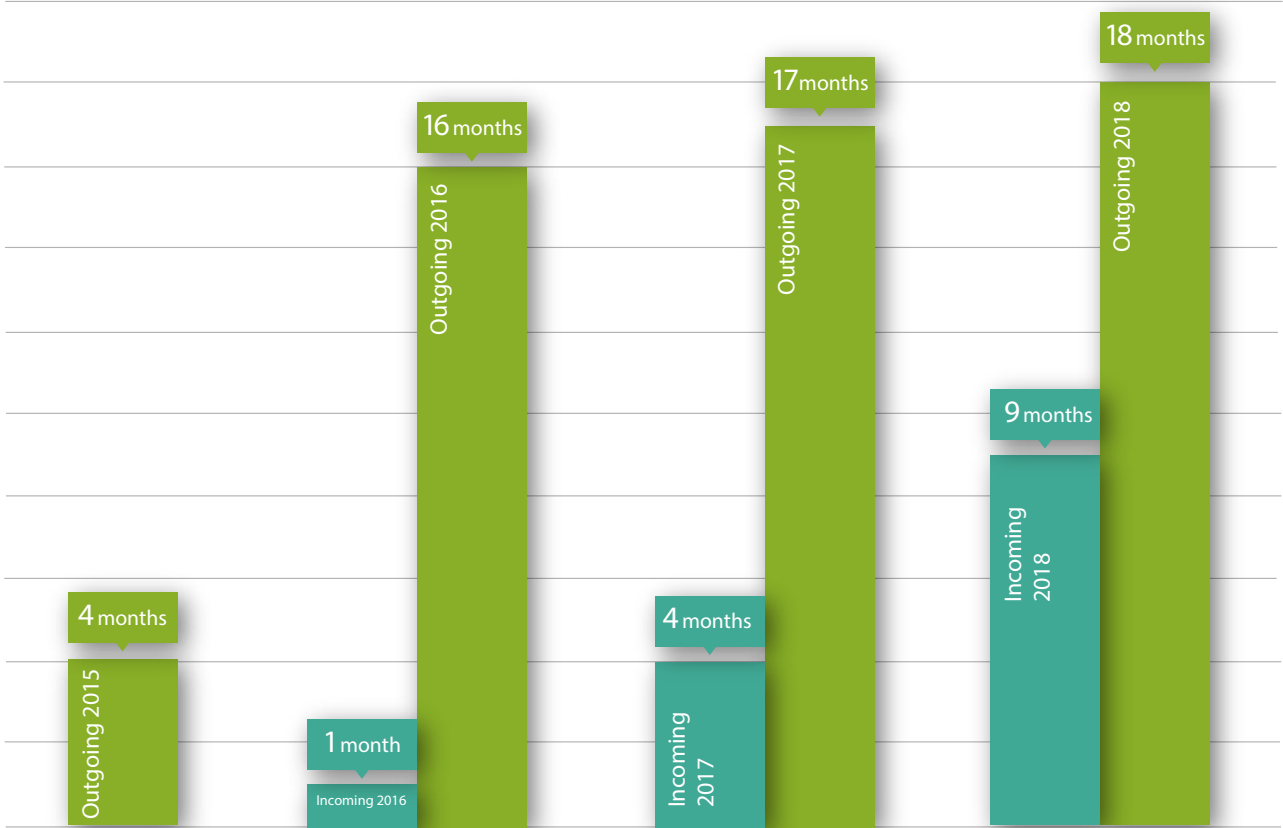
By employing incentive measures, in the long run, the Faculty succeeds to maintain the number of outgoing students and to slightly increase the total number of study stay months every year. Students from foreign universities are also interested in studying at the FFWS for one or two terms as part of a study mobility programme. In 2018, more than 60 foreign students came to the FFWS and spent overall more than 400 months here.

Student study stays



In 2016, the Faculty introduced a programme to support long-term internships (over one month in length) of outgoing as well as incoming students, which boosted the total number of internship months.

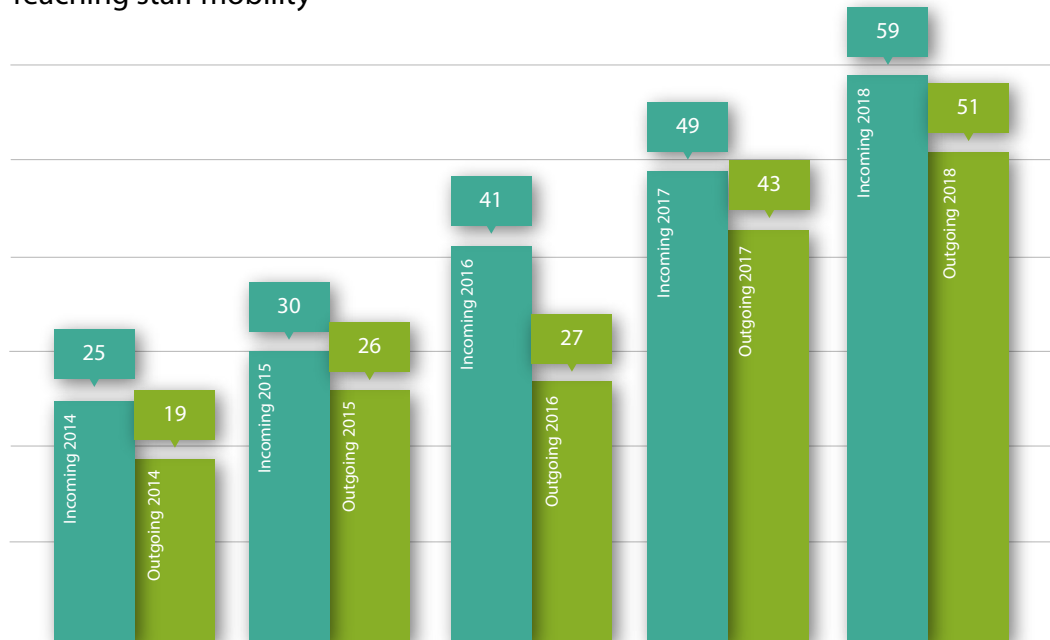
Long-term student study stays



STAFF MOBILITY

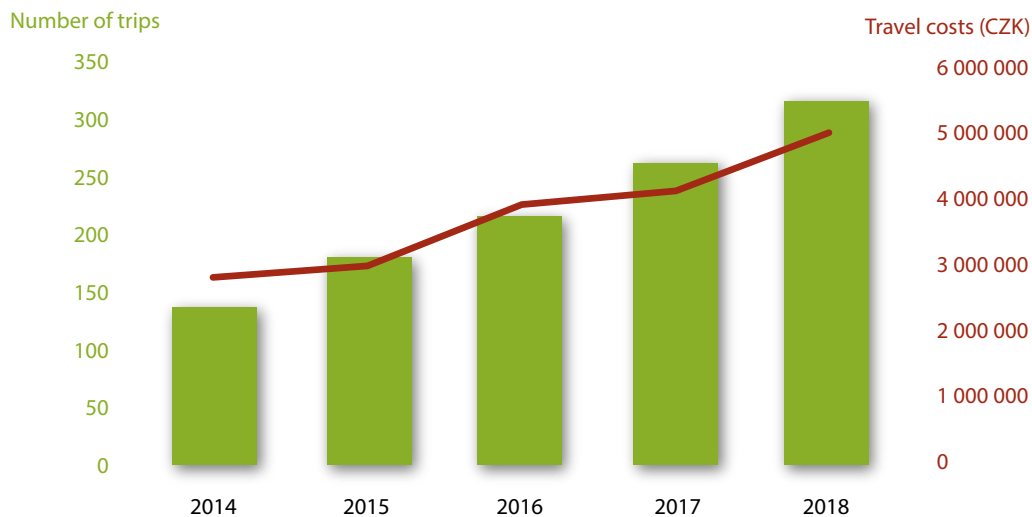
Over the recent years, there has been a clear trend, i.e. predominance of shorter-term trips with 5 to 7 days in length.

Teaching staff mobility

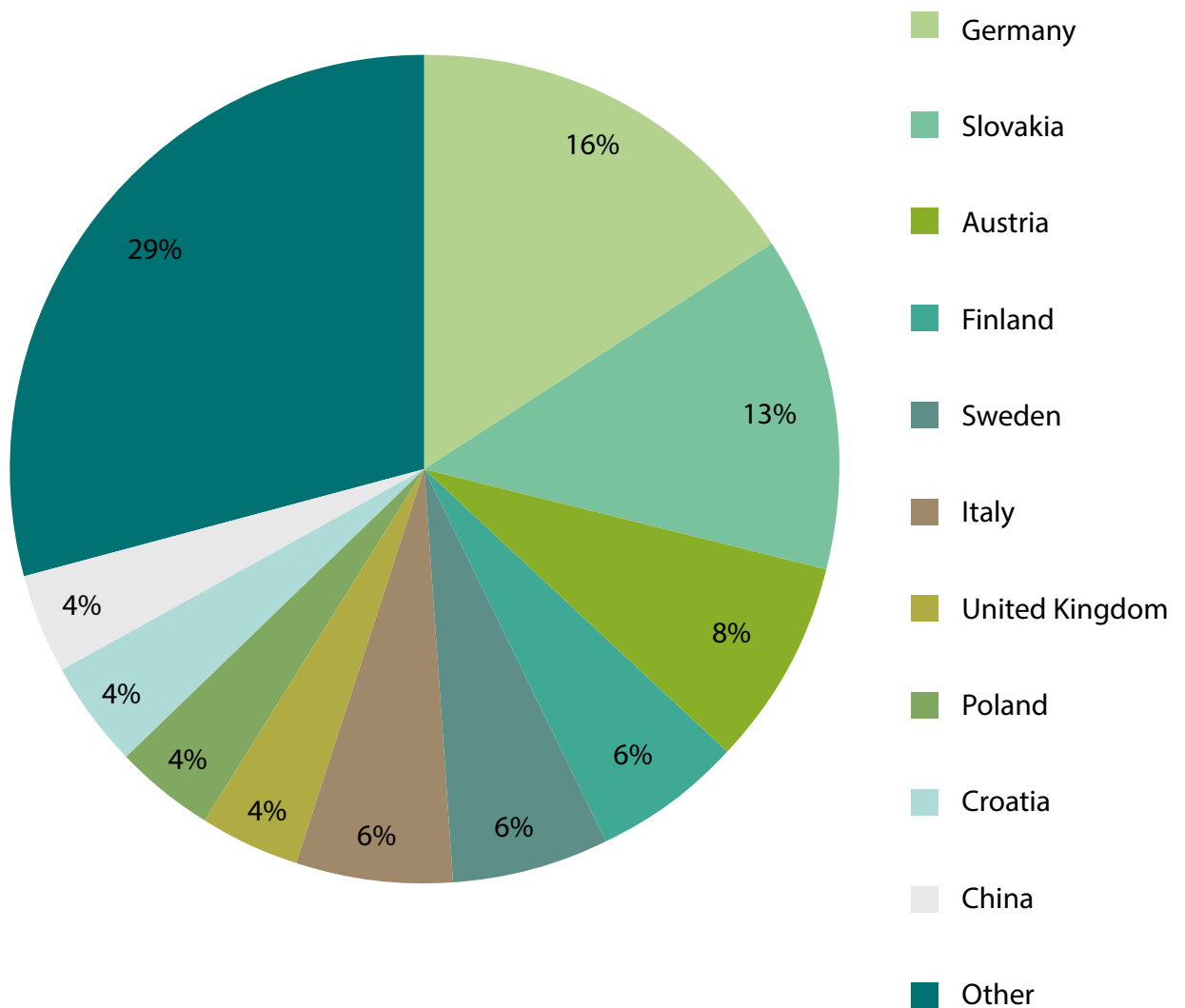


Besides educational stays, the Faculty staff also make a number of scientific- and development-oriented trips abroad. The number of such trips and the volume of funds for this form of internationalisation have been rising every year over the last 5 years.

Trips of FFWS staff abroad



Most frequently visited countries



SUMMER SCHOOLS

2018

77 foreign students
sitting on 2 short intensive
courses at the FFWS

2018

90 FFWS students
at 2 summer schools
in Poland, Slovenia,
and Croatia

ACTIVITY OF THE FFWS IN INTERNATIONAL INSTITUTIONS

The Faculty has been a long-time member of the European Forest Institute (EFI). At the annual meeting of EFI in 2018, the Faculty was rewarded for its active approach to cooperation with the privilege to organise the annual conference of EFI in 2021.

The FFWS is also an effective active member of the most important global association of forestry research organisations – International Union of Forest Research Organisations (IUFRO) – in whose structure many FFWS staff members hold the positions of coordinators or deputy coordinators of research and working groups. One of them, coordinated by the staff of the Department of Forest Management, in 2018, organised an international conference titled “Landscape Management: From Data to Decision”, attended by experts from more than 20 countries around the world.

The Faculty is also active in the following institutions: Interuniversity Consortium for Agricultural and Related Sciences in Europe (ICA) – especially in SILVA Network, Conference of Deans and Directors of European Forestry Faculties and Schools (ConDDFFES), and the programme of cooperation between China and 16 Central and Eastern European countries (CEEC) known as 16+1 Cooperation.

In 2018, the Faculty staff members were engaged in the activities of the Strategic Working Group on Forests and Forestry Research and Innovation; EIP-AGRI Focus Group on Forest Practices & Climate Change; Forest Europe; ForestDSS.

Faculty students are also involved in international networks. Every year, they take an active part in the activities of the International Forestry Students’ Association (IFSA).



ELLS

CEEC

ConDDFFES

SILVA
NETWORK



FOREIGN EXPERTS AT FFWS

Participation of foreign experts in advisory boards (External Advisory Boards) of excellent projects of the Faculty is one of the significant elements of internationalisation.

EXTEMIT-K PROJECT:

Building up an excellent scientific team and its spatiotechnical background focused on mitigation of the impact of climatic changes to forests from the gene levels to the landscape level.

EAB composition

Chairman:

- Bill Hanson, Max Planck Institute for Chemical Ecology, Germany

Members:

- Jiří Balík, Czech University of Life Sciences in Prague, Czech Republic
- Paal Krokene, Norwegian Forest and Landscape Institute, Norway
- Patrik Mlynář, Ministry of Agriculture of the Czech Republic
- Sigrid Netherer, University of Natural Resources and Life Sciences, Austria
- Lennart Olsson, Lund University Centre for Sustainability Studies, Sweden
- Martin Schroeder, Swedish University of Agricultural Sciences, Sweden
- Johanna Witzell, Swedish University of Agricultural Sciences, Sweden

EVA4.0

Advanced Research Supporting the Forestry and Wood-processing Sector's Adaptation to Global Change and the 4th Industrial Revolution

EAB composition

Chairman:

- Margarita Tomé, University of Lisbon, Portugal

Members:

- Göran Stahl, Swedish University of Agricultural Sciences, Sweden
- Fernando Fraternali, University of Salerno, Italy
- Libor Jankovský, Mendel University in Brno, Czech Republic
- Marc Palahí, European Forestry Institute, Finland
- Wolfgang Wiltschko, Goethe-Universität Frankfurt am Main, Germany
- Roswitha Wiltschko, Goethe-Universität Frankfurt am Main, Germany



High-tech

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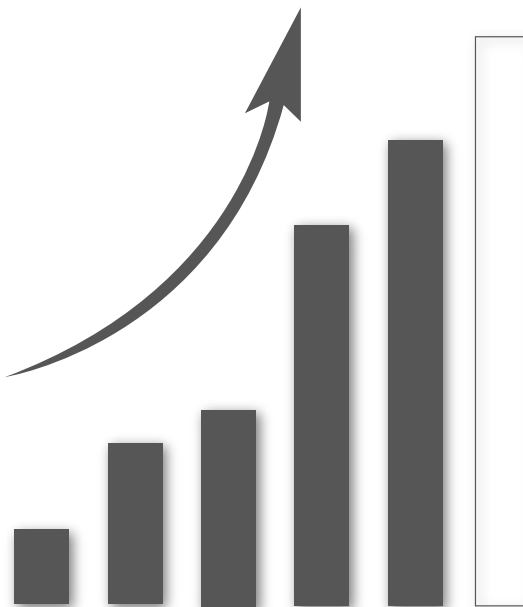
Development of the Faculty

6

6 Development of the Faculty

ACHIEVEMENTS IN DEVELOPMENT OF THE FACULTY

Development of the FFWS has been quite challenging over the recent years. After the period when the Prague-based universities had had only limited opportunities to make use of generous EU subsidies for the development of education, science and research, the situation has been improving since 2015. At that point, the FFWS was included among possible beneficiaries of the EU funds; nevertheless, its position was disadvantageous as research organisations and universities outside of Prague were ahead of it thanks to their experience gained in the previous subsidy period.



The opportunity to draw funds for the development of excellent science and modernisation of the environment for educational activities ***posed immediately a challenge to the FFWS management.***

Fortunately enough, ***the Faculty was able to make use of nearly all the OP RDE and OP GPCR calls over the last 3 years*** and to successfully start another stage of FFWS modernisation. This ***period was and still is key for further development*** as it allows for establishing the base for further transformation of the Faculty into a globally relevant research and educational institution engaged in forestry and wood sciences.

In 2018, the above efforts and achievements have been reflected mainly in the below mentioned areas:

a) MODERNISATION OF FACILITIES FOR STUDENTS AND ACADEMIC STAFF



Building of the High-tech technological-educational pavilion of the FFWS

The building of the FFWS HTP was put up in 2018. Construction works lasted from March to December 2018, cost approximately CZK 100 million (3,919,263 EUR) and were paid from the OP RDE project budget financed from the state budget and the EU budget. Starting from September 2019, the Pavilion will be used by the CULS FFWS students and teachers.



Excellent science base

Under EVA 4.0 and EXTEMIT-K projects, the existing premises of the FFWS building basement have been reconstructed and one laboratory in the Pavilion of Wood Sciences refurbished. The overall costs amounted to more than CZK 28 million (1,097,393 EUR) and the Faculty now has modern genetic, ethological, eco-ethological, and ecophysiological laboratories at its disposal.



Acquisition of instruments for teaching across FFWS

As part of the PROSTUDENT project, the Faculty has acquired various pieces of educational equipment for forestry and wood sciences study programmes at the FFWS. Throughout 2018, the FFWS purchased instruments worth CZK 20 million (783,852 EUR) under the said project. All the instruments will be used by all the Faculty departments to enhance teaching.



b) STRATEGIC FACULTY PROJECTS

Emphasis was placed chiefly on human capital development in the framework of both the key research projects. In 2018, more than 20 senior and junior scientists from various parts of the world joined the FFWS staff thanks to the projects. Project management concentrated on cooperation in heterogeneous teams with the objective to create the best conditions for production of excellent scientific outputs.

Building of investment institutional support for scientific teams was also vital for optimum implementation of both the projects.



c) BUILDING OF INTERNATIONAL PROJECT NETWORKS

The element of international cooperation is key in the area of FFWS development. It is true particularly as regards sustainability of existing projects. In total, 6 applications for international projects were submitted in 2018 out of which one was approved. Building of project partnership will be one of the chief priorities also in the coming years.



**Financial
and personnel management**

7

7 Financial and personnel management at the FFWS

FINANCIAL MANAGEMENT

In total, the FFWS obtained the sum of CZK 145,808,023 into its budget for 2018 within the frameworks of subsidies per student, the institutional support for the Long-term Conceptual Development (DKR), and specific research.

The Faculty as a whole adhered to the budget as planned.

The Faculty managed to have a budget surplus in its main operation – i.e. the operational funds – totalling CZK 17,073,459.60. The said sum was transferred to the Operational fund as at 31 December 2018.

	Scholarship Fund	Reward Fund	FRIM	Operational Fund	Donations from abroad
Balance as at 1 January 2018	CZK 3,301,469.91	CZK 10,173	CZK 8,982,203	CZK 48,076,550.92	CZK 2,650,432
Formation of the Fund	CZK 3,792,000.00	CZK 800,000	CZK 4,976,671	CZK 17,074,509.60	0
Fund withdrawals	CZK 3,178,818.00	CZK 649,693	CZK 5,612,224	CZK 15,576,874.63	0
Balance as at 31 December 2018	CZK 3,914,651.91	CZK 160,480	CZK 8,346,651	CZK 49,574,185.89	CZK 2,650,432

FACULTY AND ITS FINANCE

2018

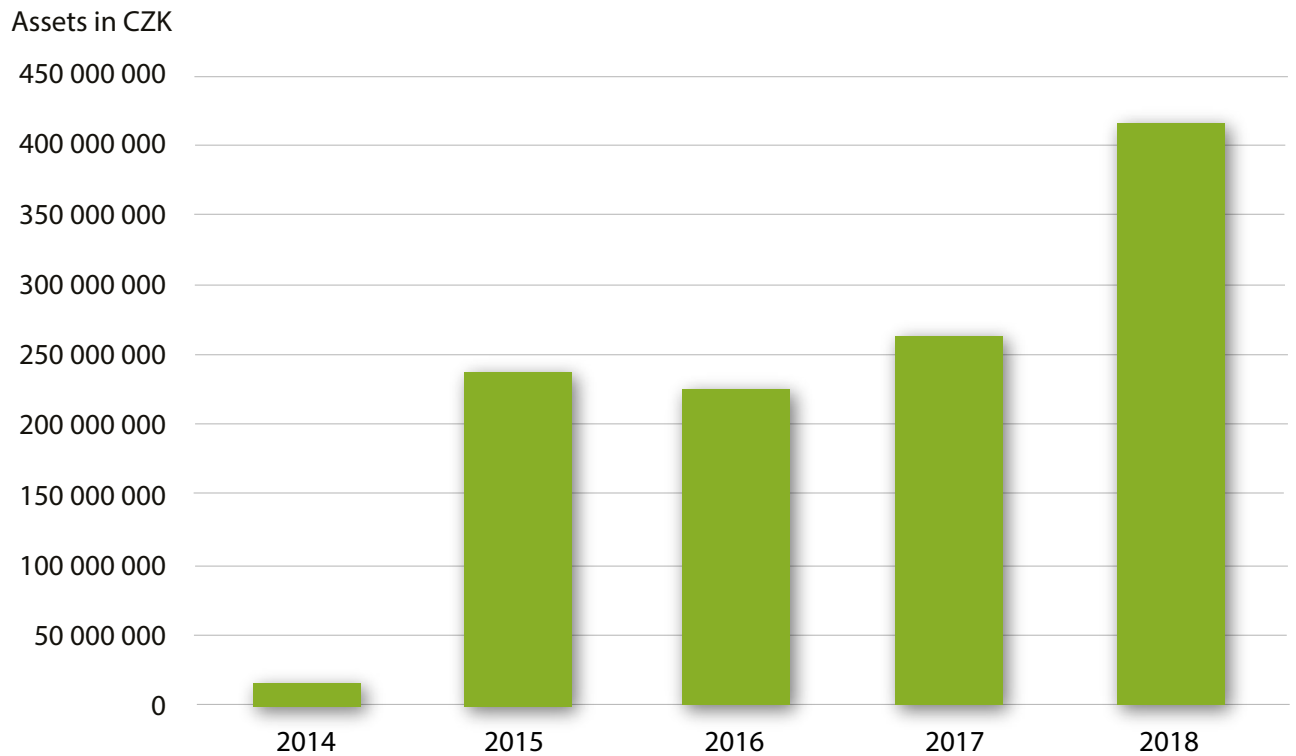
Total financial reserve of the Faculty created by main business activity as at 31 December 2018 equalled

CZK 62,554,299

(FRIM, Operational Fund Operational Fund after taxation, balances on donations from abroad)

In 2018, also the funds from investment institutional support in the total amount of CZK 4,022,979.92 were used in acquiring the tangible fixed assets and technical improvement of tangible assets.

Development of assets between 2014 and 2018



Under the granted projects, the FFWS continues to expand its infrastructure for research and education. Development of assets includes the acquisition of both instruments and buildings. In 2015, the Faculty finished building and equipping the Pavilion of Wood Sciences; in 2017, the northern part of the FFWS building basement was reconstructed; in 2018, the reconstruction of the southern part of the FFWS building basement for the EVA 4.0 project was completed, and the construction of the FFWS High-tech technological-educational pavilion was concluded.



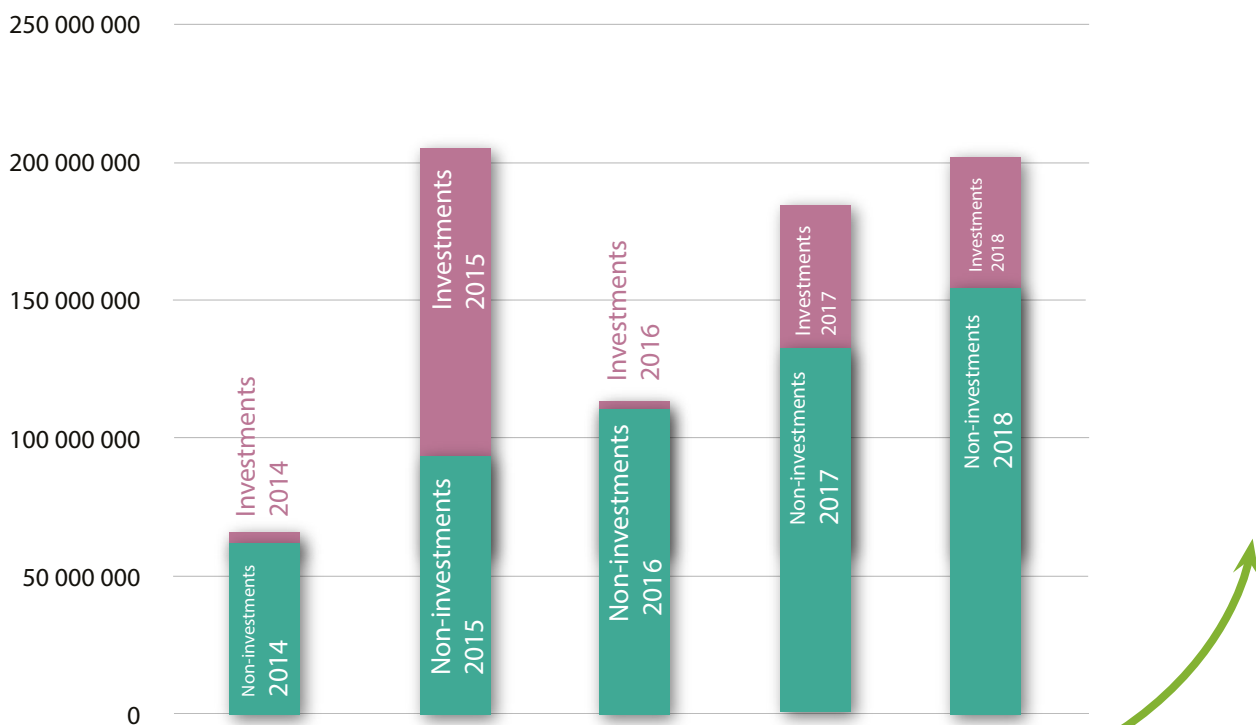
Development of income from contractual research and commercial activities

	2013	2014	2015	2016	2017	2018
Commercial activities income in total	2,284,012.56	2,446,952.72	3,219,821.30	5,396,671.65	3,818,276.94	7,032,050.50

The FFWS is consistently active in the area of commercialisation and transfer of technology and guidelines into practice. The volume of contractual research skyrocketed in 2018. In 2018, the strategic partners in contractual research included LČR s.p., KRONOSPAN CR, spol. s r.o., VÚLHM, and Foresta SG, a.s.

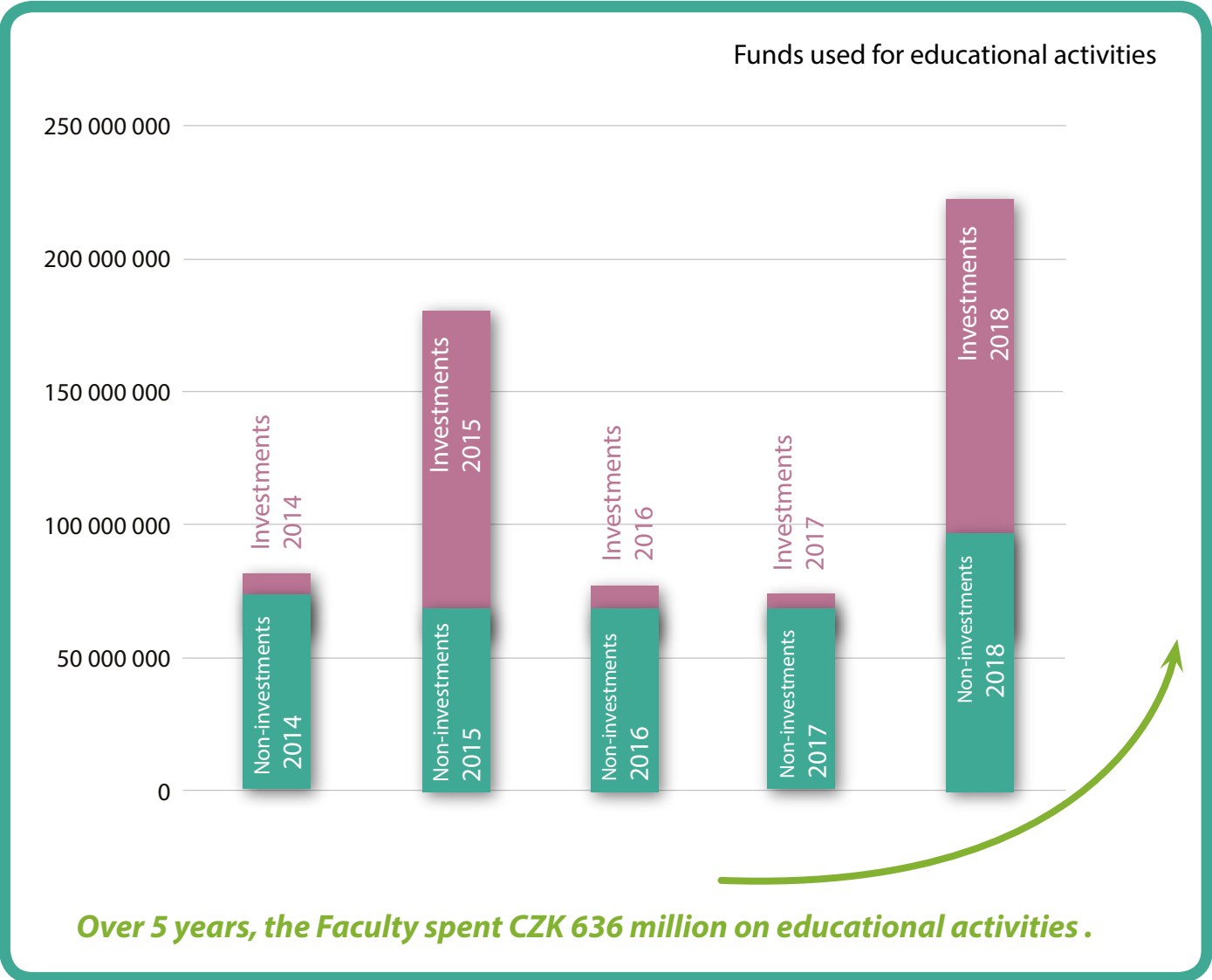
The FFWS raises funds to finance scientific and research activities from subsidies for long-term conceptual development and specific research. Funds from domestic research projects are raised especially from GA CR, TA CR, NAZV and contractual research. Investment funds are generated from operational programmes of the Ministry of Education, Youth and Sports and the EU.

Funds used for scientific and research activities (in CZK)



Over 5 years, the Faculty spent CZK 770 million on scientific and research activities

The FFWS keeps investing funds into extension and modernisation of infrastructure to provide for educational activities. Non-investment funds to provide for educational activities are generated from the contributions for educational activities, institutional support funds, and money accumulated on Faculty funds. Funds for investments are generated from operational programmes of the Ministry of Education, Youth and Sports and the EU, and, to a smaller extent, from own finance deposited on FFWS funds.



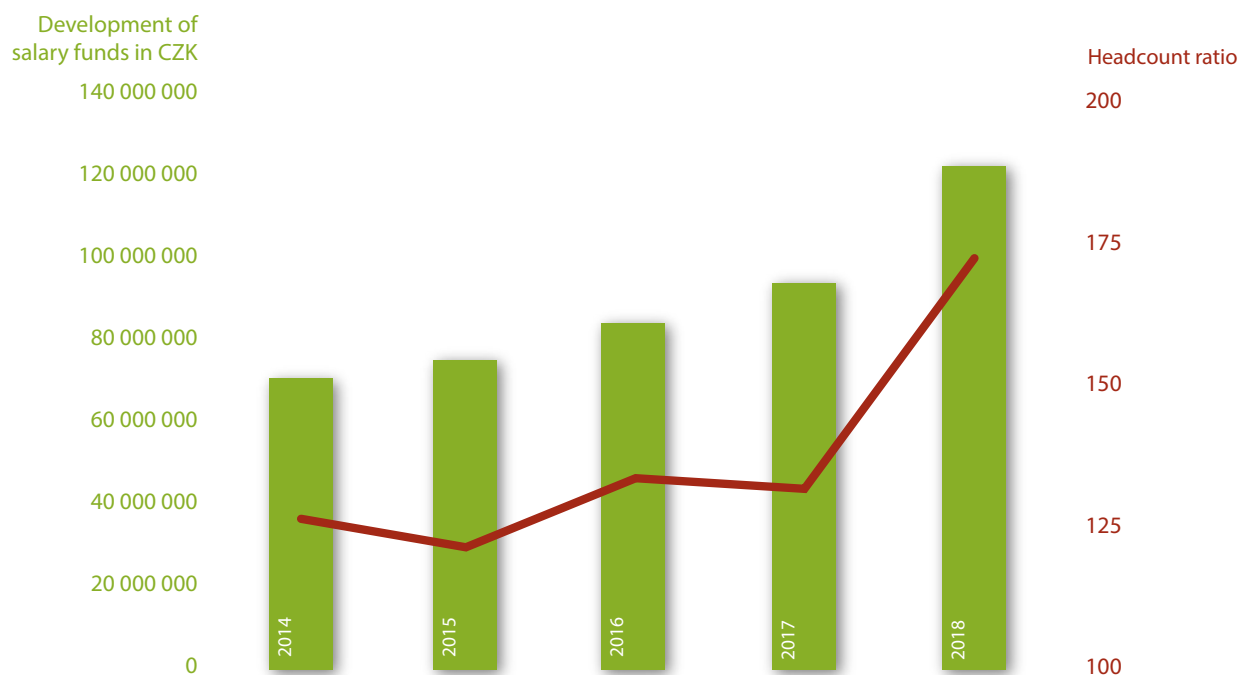
Over 5 years, the Faculty spent more than CZK 1.4 million to be able to carry out all its activities.

FFWS ORGANISATIONAL STRUCTURE

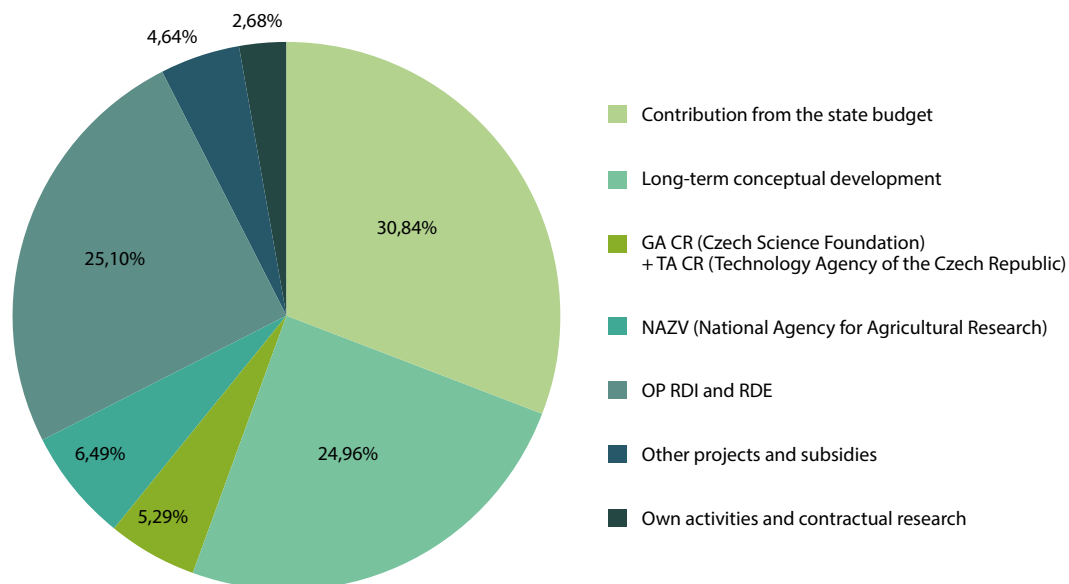
The changes in academic posts, especially the drops in numbers of calculated work loads of professors and associate professors, were caused by their participation in operational programmes, whereas on the other hand, the rise in numbers of researchers and scientists stems from accepting new as well as some current staff members into positions in operational programmes.

The structure of the Faculty in terms of qualifications, expressed by the ratio of the number of professors to the number of associate professors and the number of senior assistants to the number of assistants in 2018, equalled 21%: 29%: 50%. The goal set in the previous years – that is reaching the 45% share of professors and associate professors in the overall academic headcount – is being consistently achieved. The calculated proportion of work load of academic staff of other nationalities than Czech comes to 18.4% out of the overall academic staff work load.

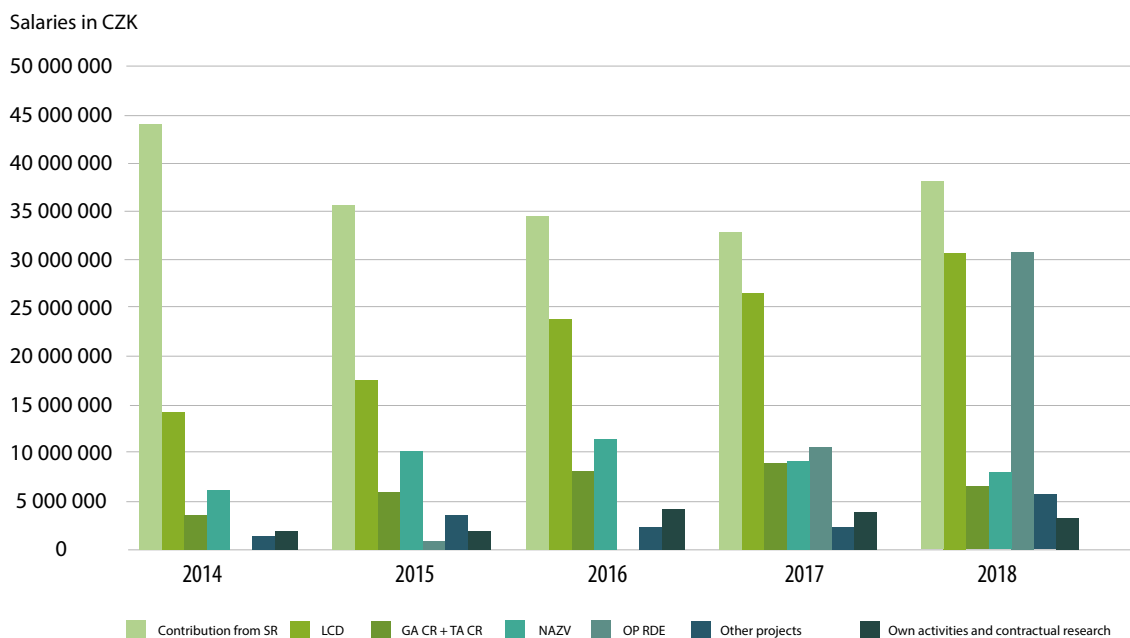
Development of salary funds and headcount



Salaries financing structure in 2018



Development of the structure of sources for salaries financing in 2014–2018



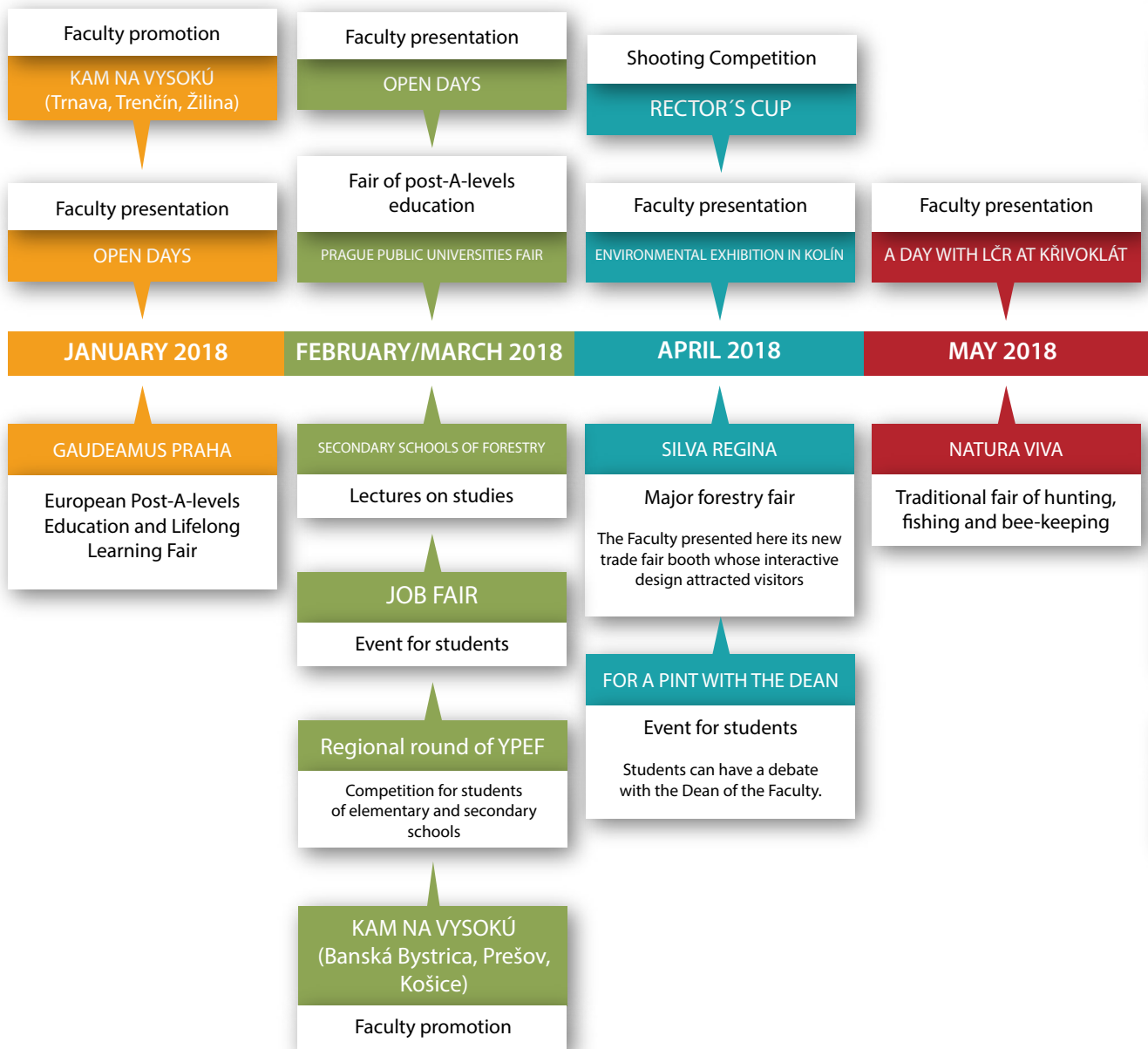


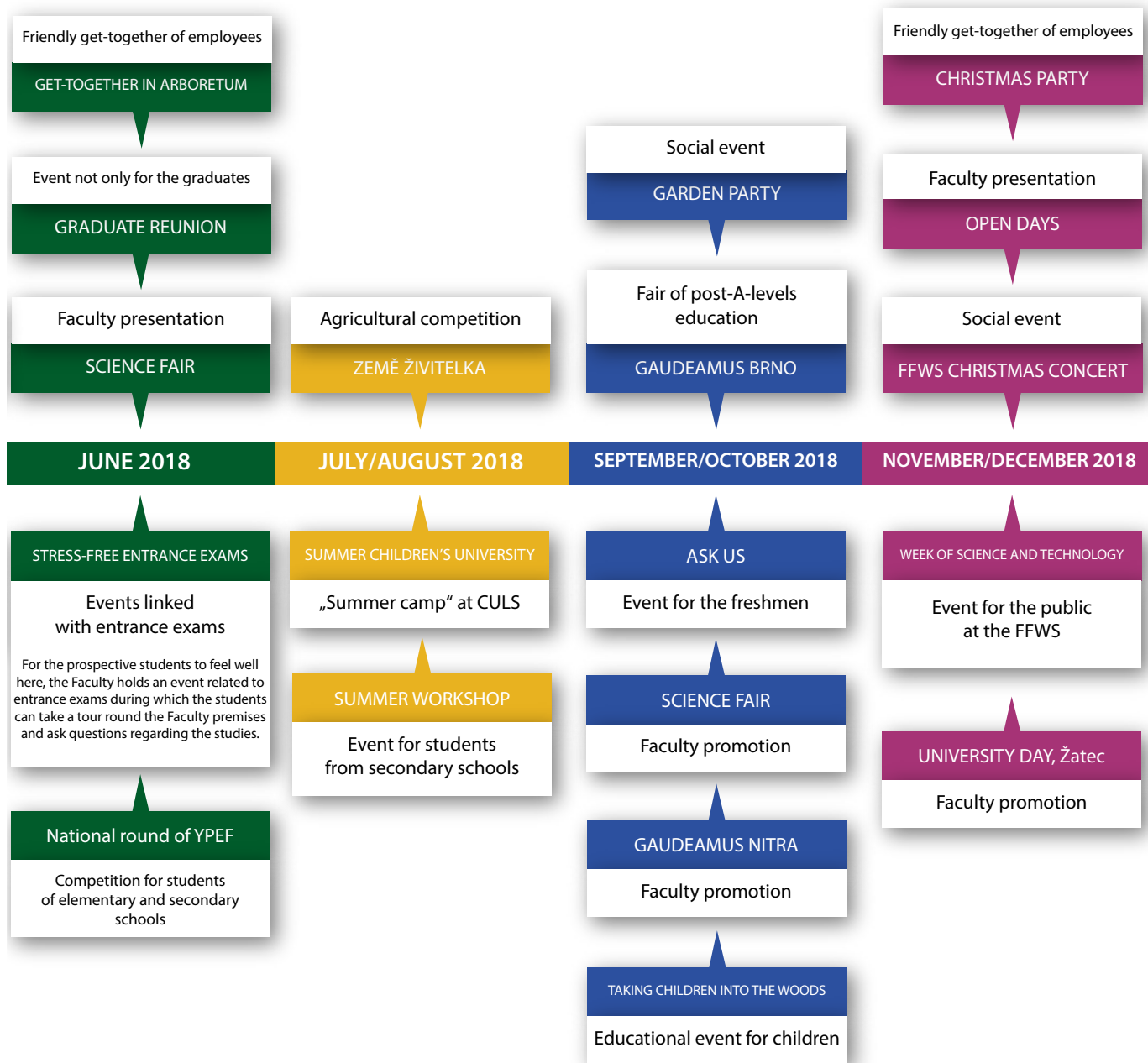
Marketing activities

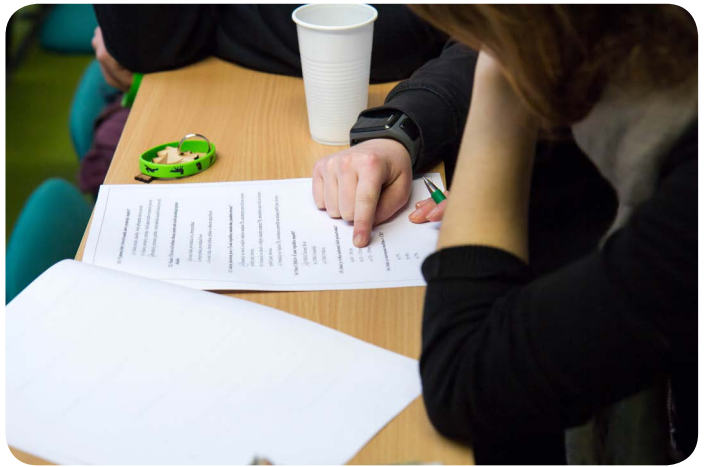
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MARKETING DEPARTMENT AS PART OF THE FACULTY STRATEGY

Each year, Faculty tries to push its promotion borders further, and create a more up-to-date image and perception of the Faculty as a whole. The Marketing Department has been creating a positive image of the Faculty on a long-term basis. This effort took the form of promotion at fairs and research events, participation of staff members, PhD students, and students at conferences, and holding of internal events.







NEW TRADE FAIR BOOTH FOR PRESENTATION AT FAIRS

The trade fair booth has been designed by a student from the Faculty of Architecture of the Brno University of Technology in a competition held to that end. The trade fair booth has been already presented at Silva Regina fair in Brno, Natura Viva fair in Lysá nad Labem, and the Bread Basket agricultural fair in České Budějovice. Its modern and interactive design drew a big number of visitors.

OTHER ACTIVITIES

The Marketing Department engaged actively in the Forest Pedagogy events and the YPEF competition. Through the Forest Pedagogy it has been bringing forestry, wood technology, and game management in entertaining and interactive ways nearer to children at early age and also to their parents thus helping them in creating a positive attitude and relationship to nature.

As traditionally, the Department was cooperating with student bodies (FFWS Buglers, Hunting Club of the CULS FFWS in Prague, Student Club of the CULS FFWS, student editorial board of Popularizace vědy – Science Promotion) and also participated in the editorial board of the CULS Bulletin “Živá univerzita” (Living University), mapping the life of the entire University.

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