

UNIVERSITÄT BERN

CDE CENTRE FOR DEVELOPMENT AND ENVIRONMENT

Centre for Development and Environment

ANNUAL REPORT 2018



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A word from the President of CDE's Board



Heinzpeter Znoj President of CDE Board

The University of Bern has formally adopted sustainability as one of its strategic goals. In 2010, it gave CDE the mandate of developing a university-wide sustainability concept, which has since been implemented step by step.

At the same time, the university has called for efforts towards internationalizing research. University staff have arguably done a better job implementing this particular goal – but success has come at the expense of sustainability. Nowadays, researchers hoping to stay at the top of their field are compelled to appear at numerous conferences, establish international partnerships, and cultivate them with regular personal visits. There is rapidly mounting pressure to travel internationally and intercontinentally. In truth, however, this level of mobility is not absolutely necessary for scientific excellence. Scientific journals remain our most important means of communication. And while oral debate at conferences is also important, it does not require physical presence. Many discussions, particularly smaller workshops, can easily be held as video conferences.

The problem of academic air travel is especially acute in the field of North–South scientific cooperation. CDE maintains research partnerships in over 40 countries. It established carbon management guidelines for itself already back in 2009. For example, staff are encouraged to prioritize travel by train within Europe and to avoid flying when possible.

For this reason, CDE has sought to have more videoconferencing rooms installed at the University of Bern, beyond the eight listed on its website – most recently at CDE's new premises on Mittelstrasse, but unfortunately in vain. At the same time, CDE is working to ensure that its partner organizations in the global South establish good communication infrastructure to substitute physical visits whenever feasible. But it is difficult to obtain funding for this. The Swiss Programme for Research on Global Issues for Development (r4d programme), focused on North–South research partnerships, has funded hundreds of meetings and thousands of long-haul flights in recent years, but never earmarked any funds to invest in the videoconferencing infrastructure of partner institutions.

Promotion of sustainable research capacity requires easy access to scientific knowledge worldwide, with related discussion equally possible for Southern partners without significant travel. Indeed, open-access publication of scientific results is just as important as training researchers in the South. A strong commitment to these ideals is shared by CDE's Education for Sustainable Development Cluster, the International Graduate School North-South, and numerous researchers at CDE working in SNSF- and EU-sponsored projects.

Together with funding agencies, the University of Bern should contribute to making low-carbon academic communication and careers possible, both in the North and in the South.

Heinzpeter Znoj, President of the CDE Board

CDE facts and figures*

Institution	Centre of competence of the University of Bern, founded in 2009
Mandate	CDE's commitment is to advance innovative approaches in research and education that are appropriate for transforming highly complex sustainability problems into widely supported sustainable development pathways.
Directors	Prof. Dr. Peter Messerli, Prof. Dr. Thomas Breu
Staff members	100 from around 25 disciplines
Annual turnover	CHF 18,118,400 (for details see pp. 21–22)
Number of ongoing projects	74
Regions	CDE oversaw activities in 47 countries worldwide in 2018; key regions include the Horn of Africa, East Africa, mainland Southeast Asia, the Central Andes, and Switzerland
Courses of study	BSc Minor in Sustainable Development MSc Minor in Sustainable Development PhD Programme: International Graduate School (IGS) North-South, a graduate school of the Universities of Basel, Bern, Lausanne, and Zurich CAS in Sustainable Development (in German)
Number of students	BSc: 340 from 31 disciplines MSc: 55 from 11 disciplines IGS North-South: 107 in total, including 33 enrolled at international partner institutions and 42 enrolled at the University of Bern

* As at 31 December 2018

Looking back and looking ahead

Thomas Breu, Peter Messerli



Thomas Breu

Peter Messerli

Just minutes after landing, passengers arriving at Nairobi airport will encounter the UN 2030 Agenda for Sustainable Development: The 17 goals are prominently posted for all to see. Vientiane, Addis Abeba, and other key cities in the global South are similarly seeking to raise awareness of it. And indeed, the 2030 Agenda has gathered momentum in the global debate.

In Switzerland, however, the agenda largely remains a niche topic. Discussions here began promisingly. But the outcome in mid-2018 was a lacklustre Swiss Federal Council report to the UN, proposing measures that are simply not sufficient to address the enormous challenges ahead.

A small country that is strongly affected by global change, Switzerland should be seizing the chance offered by the 2030 Agenda to help shape inevitable transformations promptly and actively. But this requires a holistic mindset and coherent policies capable of tackling the challenges raised by the 2030 Agenda with dedication.

Research capacities in developing countries must be greatly increased

One crucial aspect concerns research and its promotion. The goals of the 2030 Agenda will not be achieved without engaged, transformative science – conducted in both the global North and South. Recent statistics from the 2015 UNESCO Science Report vividly show where the need is greatest: While OECD countries boast 3,500 scientists per million inhabitants, the word's least-developed countries have only 66 scientists per million.

This limited research capacity stands in sharp contrast with least-developed countries' urgent need for context-specific knowledge. They require it to build a solid foundation for socially and economically sustainable development – without transgressing biophysical planetary boundaries. Indeed, there is a pressing need to finally give researchers in developing countries easy access to scientific knowledge, necessary technology, and relevant research networks. In the short term, it is critical to consolidate and make existing knowledge available for their use. And in the medium term, research capacities must be massively increased and suitable science systems promoted.

Sober reality of modest Swiss support levels

North–South and South–South research partnerships are a key, fast-acting lever to tackle imbalances in science capacity. This has been recognized by numerous foundations and several countries, in particular the UK, France, Canada, and the Netherlands.

But what about Switzerland? Looking at its current research and development policy reveals that it invests comparatively little in research on global challenges, especially research partnerships

with the global South. An exploratory report commissioned by the Swiss Science Council in 2018 came to a similarly sober conclusion, stating that Swiss foreign research policy lacks coordination, clear responsibilities, and full information on relevant federal expenditures – in short, it lacks coherent strategic orientation.

Close collaboration between CDE and local partner institutions

For us at CDE – where working at the interface of education, science, and development policy is our daily reality – these challenges mean nothing less than a further call to action: Our efforts are more important than ever! We can look back – not without pride – on 30 years of experience in combining global perspectives and locally adapted strategies in research on behalf of concrete solutions for sustainable development. And it has always been done in close collaboration with our local partner institutions.

In addition to scientific rigour, our research collaboration concept emphasizes integration of non-academic knowledge from civil society organizations, government agencies, and the private sector – as well as the rich traditional knowledge of local populations. The insights that emerge from these collaborative efforts are then used to introduce forward-looking solutions into political and societal debates. Our collaborative networks have also proven valuable in overcoming political challenges, as they help to bridge divides between actors with even widely diverging views – showing the potential of science diplomacy.

Practically relevant research

Research in and with partner countries also enables creation of context-specific databases and knowledge about the long-term dynamics of social-ecological systems. In Laos, for example, our research cooperation led to publication in 2018 of the first-ever atlas of agriculture, as well as a new socio-economic atlas – both featuring open access. Collaboration can also provide a basis for in-depth comparative case studies across multiple countries. A 2018 CDE research project in the Mekong region, for example, impressively revealed links between international land acquisitions and deforestation – and showed what this means for global efforts to mitigate climate change.

Another CDE study examined the interplay of deforestation, agricultural expansion, social inequality, and overall political conditions in ten Latin American countries. The study's main finding – that social inequality also harms the environment – attracted considerable international attention.

A new initiative for transformative research

CDE's transformative understanding of science was further strengthened in 2018 thanks to collaboration with the Oeschger Centre for Climate Research and the Institute of Plant Sciences, both of the University of Bern. With support from the Wyss Foundation, founded by Swiss philanthropist Hansjörg Wyss, researchers from Bern and their local partners in Kenya and Peru have begun to look for innovative ways of harmonizing nature conservation, human well-being, and natural resource use.





Presentation of the Socio-Economic Atlas of the Lao PDR in Vientiane by Michael Epprecht, CDE; Tomas Piras, (then) Head of Governance Programme in Lao PDR ad interim, SDC; and Tim Enderlin, (then) Director of Cooperation in Laos and the Mekong Region, SDC (left to right). Photo: Touravanh, SDC

Contributions to global assessment reports

Aiming to strengthen the role of sustainability science, CDE also contributed to relevant global sustainability reports in 2018. Especially notable is Peter Messerli's ongoing mandate as co-chair of the group of scientific experts drafting the 2019 UN Global Sustainable Development Report. In addition, CDE participated in reviewing the Special Report on Climate Change and Land of the International Panel on Climate Change (IPCC); provided one of the lead authors of the global assessment of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES); and was active in the conception of the second Global Land Outlook report of the UN Convention to Combat Desertification (UNCCD).

Participation in key national and international bodies

CDE's well-regarded position in sustainable development circles was once again demonstrated by the prominent involvement of its staff in important national and international bodies working on relevant core issues. Examples include the Swiss federal government's official advisory group on implementation of the 2030 Agenda in Switzerland, the sustainability science steering group of the Swiss Academy of Sciences, the UNITWIN/UNESCO Chairs Programme, leading networks like Future Earth, and various relevant commissions of the Swiss Academies of Arts and Sciences. Notable here was the election of CDE scientist Anne Zimmermann as president of the Copernicus Alliance, a European network of universities and colleges committed to transformational learning and change for sustainable development.

Bringing policy dialogue to the public

In Switzerland, CDE organized three major public events, in collaboration with partners and civil society organizations, focused on promoting understanding of globalization and sustainability issues: a national conference on the 2030 Agenda coupled with the launch of Sustainable Development Solutions Network Switzerland; the first Swiss–UN day; and a conference on the Swiss "Fair Food" initiative voted on in September 2018. In addition, CDE received significant coverage from leading Swiss media outlets, making multiple contributions to high-profile sustainability debates.

Study and training courses in high demand

The two study programmes that CDE offers – the bachelor's-level minor and the master's-level minor in sustainable development – can also look back on a successful 2018. While interest in the bachelor's-level programme remained consistently high, with 340 students from 31 disciplines, the number of master's students has doubled since the course was launched in 2016 and has now reached 55 students from 11 disciplines, plus 18 students from PHBern, Bern's university of teacher education. Joined by the University of Lausanne in autumn 2017, the International Graduate School (IGS) North-South further strengthened its position as the leading Swiss graduate school on global change, innovation, and sustainable development. In 2018 it had a total of 107 doctoral students, including 33 enrolled at international partner institutions and 42 enrolled at the University of Bern.

Programme highlights



February: Official launch of Sustainable Development Solutions Network Switzerland

What would it cost to make Switzerland genuinely sustainable? What responsibility does Switzerland have internationally in helping to ensure that the goals of the UN 2030 Agenda are achieved? A conference on 15 February 2018, organized by CDE and Biovision to mark the launch of the Sustainable **Development Solutions Network** Switzerland, brought together 250 participants from policy, business, science, think tanks, and civil society to debate these issues.

JANUARY FEBRUARY MARCH APRIL

February: Visit of a high-level delegation to CDE project in Myanmar

In February 2018, a Swiss delegation visited the OneMap initiative in Myanmar. The delegation was led by Manuel Sager, Director General of the Swiss Agency for Development and Cooperation (SDC), and Paul Seger, Swiss Ambassador to Myanmar. OneMap Myanmar is a government initiative to make data and information about land tenure and land use publicly available. SDC is supporting this effort through a CDE project.





March: <u>First Swiss–UN Day with</u> Joseph Deiss

The first Swiss–UN Day was held on 23 March 2018, about 15 years after Switzerland joined the United Nations. The conference was organized by the University of Bern's World Trade Institute, CDE, and the association Gesellschaft Schweiz-UNO. More than 20 representatives from diplomacy, international organizations, science, and civil society held speeches for over 230 attendees. Joseph Deiss, former Swiss Federal Councillor and former President of the UN General Assembly, emphasized that "today's global problems can no longer be solved by individual states." He stated that every country, including Switzerland, has a duty "to put the well-being of the whole world first."



schaft und Umwelt Wie Sprache unseren Umgang mit der Natur prägt

May: <u>Publication of a</u> <u>"language compass" on land-</u> scapes and the environment

How does language shape our perception of landscapes and nature? And how does it influence our thoughts and actions? CDE researchers examined key German terms used to describe landscapes and nature. In early May 2018, they published their results in a German-language book. Their findings show that language increasingly reflects technocratic and economic perspectives. The book invites readers to consider, for example, what happens when a "scenic view" becomes a "landscape service" and an "apple" or "wheat" become "agricultural products".





June and December: Publication of Lao agriculture and socio-economic atlases

The Atlas of Agriculture in the Lao PDR was presented in Vientiane on 21 June 2018. The first of its kind, the atlas depicts detailed data on changes in agricultural production in Laos. It was created jointly by CDE and the Lao Ministry of Agriculture and Forestry, with financial support from the Swiss Agency for Development and Cooperation. A new edition of the Socio-Economic Atlas of the Lao PDR followed in December 2018. Both atlases are available in Lao and in English, and feature open access.

ΜΑΥ

May: <u>Completion of Europe-</u> wide soil project

CDE scientists worked with colleagues at Agroscope to find out how the "Dyker", a device attached to potato planters, can be used to manage erosion and waterlogging in potato fields. The study was part of RECARE, a European research project on soil protection. Towards the end of the project they presented their results in various forms, including a field event on 24 May 2018 with farmers at the Frienisberg case study site near Bern.



JUNE

June: CDE's move to new premises

In June 2018, CDE relocated to Mittelstrasse 43 in Bern, together with several other centres and institutes of the University of Bern. The new premises were inaugurated with an open day on 27 October.





July: Launch of a new tool for satellite image preprocessing and composition

CDE researchers developed a user-friendly online tool for easy preprocessing of remotely sensed data. The tool enables users with limited expertise in remote sensing to produce maps for publications or field visits. Links to the tool, a user guide, and technical documentation were made available on CDE's website in summer 2018.



September: Contribution to Swiss debate on "Fair Food" initiative

On 4 September 2018, SWISSAID and CDE hosted a high-profile event titled "Fair Food for All?". It focused on the Swiss national "Fair Food" initiative that was up for a popular vote on 23 September 2018. Panellists discussed opportunities and challenges of the initiative and its potential impact on developing countries.



October: Recognition for CDE researchers at Future Forward Summit

At the Future Forward Summit in mid-October, CDE senior scientist Anne Zimmermann was elected as the new president of the Copernicus Alliance, the European network on higher education for sustainable development. In addition, CDE scientist Lilian Trechsel won the essay competition organized by the journal Higher Education Policy.



November: Pilot project with support from Wyss Foundation

In early November 2018, philanthropist Hansjörg Wyss announced his support for a one-year pilot project in Kenya and Peru. Researchers from CDE, the Oeschger Centre for Climate Research, and the Institute of Plant Sciences, all of the University of Bern, began working on this practice-oriented research project together with representatives of local authorities, nature conservation organizations, and local populations in summer 2018. The aim is to establish a common understanding of the main challenges facing protected areas and local communities, and to develop concrete innovations to overcome them.

NOVEMBER DECEMBER

JULY AUGUSI

SEPTEMBER

OCTOBER

October: Publication of study

September: Using the 2030 Agenda to advance sustainable development in mountains

The 2030 Agenda for Sustainable Development and the associated Sustainable Development Goals offer a useful framework for assessing sustainable development in mountain regions and devising strategies for its promotion. In a working paper published in September 2018, scientists from CDE and the Mountain Research Initiative discuss gaps in data on sustainable development in mountains and propose possible ways of addressing them.



on promoting sufficient lifestyles (in German)

Share, exchange, repair: Offers and initiatives aimed at sustainable consumption are booming. CDE researchers studied the most promising initiatives aimed at attracting people to sufficient living – and how the public sector can help. Their analysis, commissioned by the City of Zurich, was published in October 2018.



Photo credits: 1 Peter Lüthi, Biovision; 2 OneMap Myanmar; 3 World Trade Institute; 4 Cover of the book; 5 Gaby Allheilig, CDE; 6 The covers of the two atlases; 7 Rolf Siegenthaler, Bern; 8 Google Earth Engine; 9 Eliane Beerhalter; 10 pixabay; design: Christoph Bracher; 11 Ecocampus Belgium; 12 shutterstock.com; 13 Hanspeter Liniger, CDE

CDE's programme activities in 2018

CDE maintains a worldwide network of national and international research partnerships. Our cooperation activities, many of them with countries from the global South and East, enable us to better understand the impacts of global change and to develop appropriate strategies that are adapted to local and regional contexts. We also support Swiss and international academic networks that coordinate sustainability research. We act as intermediaries between research and education, and are committed to innovative science policy.

CDE's key partner regions

CDE runs activities with a regional or national focus in 74 projects across 47 countries worldwide. Key regions are East Africa, the Horn of Africa, mainland Southeast Asia (especially Laos and Myanmar), and the central Andes (see green areas on the map). Many of these projects and programmes represent a long-term engagement.

Major project activities

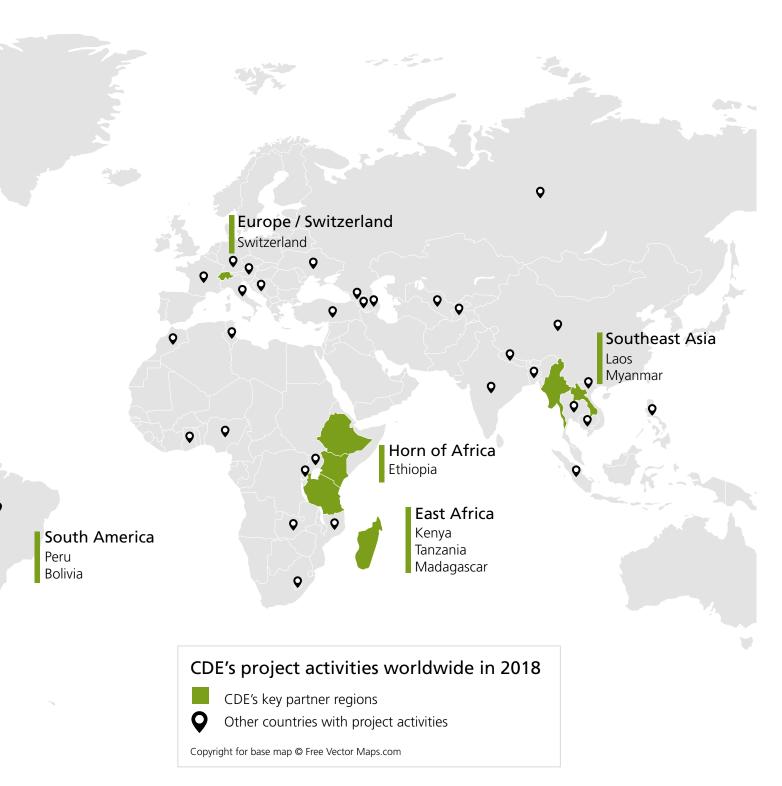
CDE and its regional partners have several long-term applicationoriented mandates from various funding partners. For example, we more recently set up a data and transparency initiative on land issues, OneMap Myanmar, together with Myanmar's government and civil society. In Laos, the Lao DECIDE Info information hub is successfully supporting policy development and decision-making. The same is true of the national Water and Land Resource Centres in Kenya and Ethiopia, which focus on integrated land and water management approaches in training, research, and policy.

Academic networks in Switzerland

In Switzerland, CDE plays an active, policy-shaping role in various bodies of the Swiss Academies of Arts and Sciences – for example in ProClim (the Forum for Climate and Global Change), KFPE (the Commission for Research Partnerships with Developing Countries), td-net (the Network for Transdisciplinary Research), and saguf (the Swiss Academic Society for Environmental Research and Ecology). We are also actively involved in other research, educational, and development organizations.

Global networks for sustainable development

Our portfolio comprises global networks that CDE has built and strengthened together with international partners over many years. Examples include the WOCAT (World Overview of Conservation Approaches and Technologies) network, which promotes sustainable land management practices around the world, and the Land Matrix, a global initiative to increase transparency in transnational land deals. CDE hosts the International Project Office of the Global Land Programme (GLP), one of Future Earth's core projects and the largest research network in land system science. Further, CDE is engaged in international initiatives to support implementation of the 2030 Agenda. It co-hosts the Sustainable Development Solutions Network (SDSN) Switzerland, and CDE Director Peter Messerli co-chairs the group of scientists tasked with drafting the upcoming United Nations Global Sustainable Development Report (GSDR).



Publications in 2018

Peer-reviewed articles in journals

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Fercher M, Mueller MH, Alaoui A. 2018. Modelling the impact of land use changes on peak discharge in the Urseren Valley, Central Swiss Alps. Catena 163:321–331.

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Organization chart*

Board

President Prof. Dr. Heinzpeter Znoj

Board Members Prof. Dr. Markus Fischer** Prof. Dr. Chinwe Ifejika Speranza Prof. Dr. Ben Jann***

Management

Directors Prof. Dr. Peter Messerli Prof. Dr. Thomas Breu

Executive Committee

Prof. Dr. Peter Messerli, Director Prof. Dr. Thomas Breu, Director Urs Balsiger, Associate Director, Finance and Personnel Tanja Berger, Associate Director, Strategy and Processes Dr. Sabin Bieri, Associate Director, Portfolio and Networks PD Dr. Andreas Heinimann, Associate Director, Regional Cooperation

Programme Committee Executive Committee Heads of Cluster CDE Members

Operational Units

Services and Strategy

Finance and Personnel Urs Balsiger

- Secretariat
- ICT and Web Data
- GIS / Remote Sensing

Strategy and Processes Tanja Berger

- Communications
- Knowledge Management
- Editing and Translation

Thematic Clusters

Land Resources Dr. Albrecht Ehrensperger PD Dr. Flurina Schneider

Socio-Economic Transitions

Dr. Sabin Bieri Dr. Stephanie Moser

Sustainability Governance

Markus Giger Prof. Dr. Stephan Rist

Education for Sustainable Development Dr. Karl Herweg

Dr. Anne Zimmermann

CDE Members****

- Sustainable Land Management, Institute of Geography, Prof. Dr. Chinwe Ifejika Speranza
- Labour and Social-Ecological Transitions, Institute of Geography, Prof. Dr. Patrick Bottazzi
- Geography and Sustainable Development, Institute of Geography, Prof. Dr. Susan Thieme
- Culture, Ecology and Politics, Institute of Social Anthropology, Prof. Dr. Heinzpeter Znoj and Prof. Dr. Tobias Haller
- Biodiversity and Ecosystem Services, Institute of Plant Sciences, Prof. Dr. Eric Allan
- Crop Breeding and Genomics, Institute of Plant Sciences, PD Dr. Zerihun Tadele
- Sustainable Social Development, Institute of Sociology, Prof. Dr. Sonja Vogt
- Contemporary History, Institute of History, Prof. Dr. Christian Gerlach

Regional Cooperation

PD Dr. Andreas Heinimann

- Horn of Africa
- East Africa
- Southeast Asia
- South America
- Europe / Switzerland

* As at 31 December 2018

** Institute of Plant Sciences

*** Institute of Sociology **** CDE members contribute to research and teaching, and benefit from CDE's services and networks.

Finances

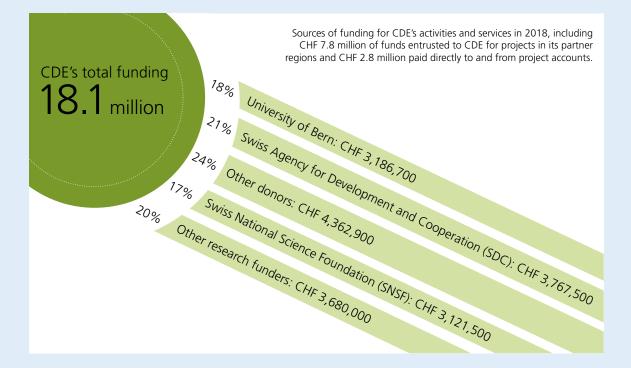
Financial account for 2018¹ (in CHF, rounded)

INCOME		
External funds		
Programme income	4,192,700	
Other income (services)	158,900	
Total external funds	4,351,600	
University funds		
Contribution to office rent ²	0	
Contribution to personnel expenditure	2,530,100	
Contribution to operating expenses	657,900	
Total university funds	3,188,000	
Total income	7,538,300	
EXPENDITURE		
Personnel		
Salaries		5,822,100
Social benefits		1,250,700
Total personnel		7,072,800
Other expenditure		
Office rent		0
Office operating expenses		392,300
Travel		75,300
Miscellaneous		203,500
Total other expenditure		665,900
Accruals		–205,600
Total expenditure		7,538,300
		.,

The financial account and balance sheet for 2018 were audited externally and internally and were approved.

¹ Does not include funds entrusted to CDE for projects in its partner regions and funds paid directly to and from project accounts

project accounts ² Paid directly by the university administration



Balance sheet as at 31 December 2018 (in CHF, rounded)

ASSETS	
Current exects	
Current assets	25.400
Liquid funds, CDE	35,400
Accounts receivable	2,273,800
Total current assets	2,309,200
Prepaid expenses	45,300
Total assets	2,354,500
LIABILITIES	
Current liabilities	
Accounts payable	7,400
Project funds	1,156,400
Prepaid income	0
Tied reserves ¹	300,000
Total current liabilities	1,463,800
Equity capital	
Capital ²	699,300
General reserves ³	191,400
Total equity capital	890,700
Total liabilities	2,354,500

¹ Reserved for severance payments and special research

² Equity capital at date of establishment of CDE as an interdisciplinary research centre in mid-2009

³ Accumulated gains and losses from previous years



CDE staff at an internal workshop on how we can improve our contribution to sustainability transformations. Photo: Leonie Schmid

Publisher: Centre for Development and Environment (CDE)

Citation: Centre for Development and Environment. 2019. Annual Report 2018. Bern, Switzerland: Centre for Development and Environment.

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Editing and translation: Gaby Allheilig, Anu Lannen, Marlène Thibault (CDE) Proofreading: Stefan Zach (z.a.ch gmbh)

Layout: Simone Kummer (CDE) Infographics: Christoph Bader (CDE)

Printing: Druckerei Varicolor AG, Münchenbuchsee

Cover photo: © shutterstock.com

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