

ONE EARTH GUARDIANS

Introduction of One Earth Guardians Development Program

One Earth Guardians Development Institution

Head of Steering Committee

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Recent examples of problems on the Earth might be caused by human beings' activities

abnormal climate, global warming-up
resource depletion

destruction of environment (ex. increase of agricultural landscape,
development of residential land, deforestation,
contamination of water quality, air pollution)

increases of industrial waste, food loss

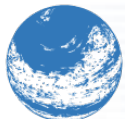
human population increase

deficiency of food and water

decrease of diversity, monoculture

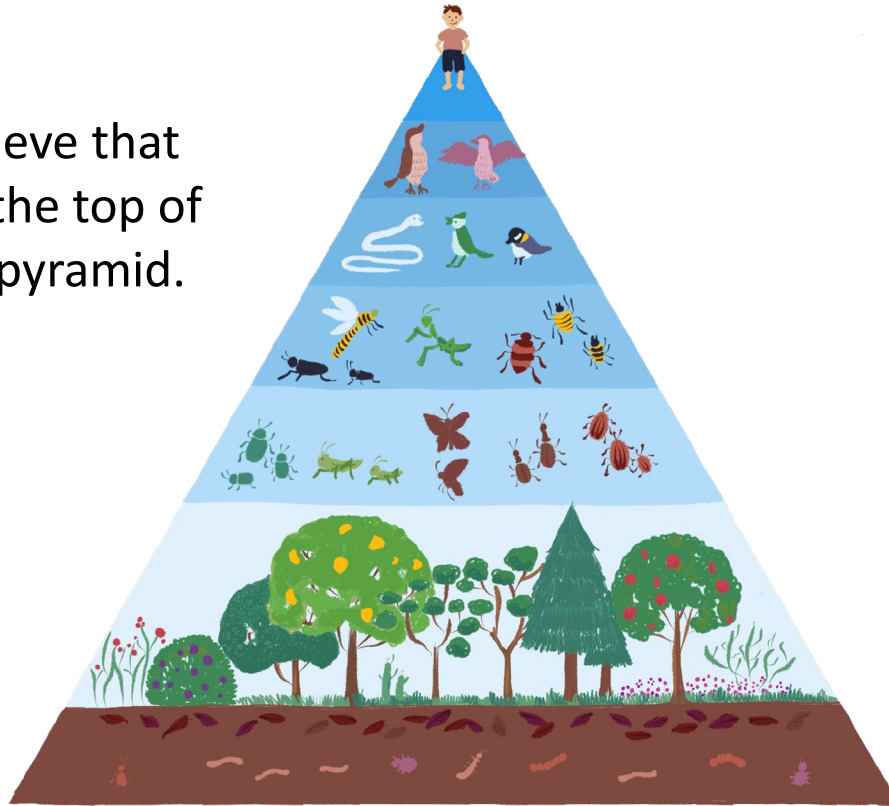
economical raising of agricultural products

Apparently, this is crisis mode...

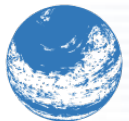


If we keep the present lifestyle, can we survive on the Earth? (1)

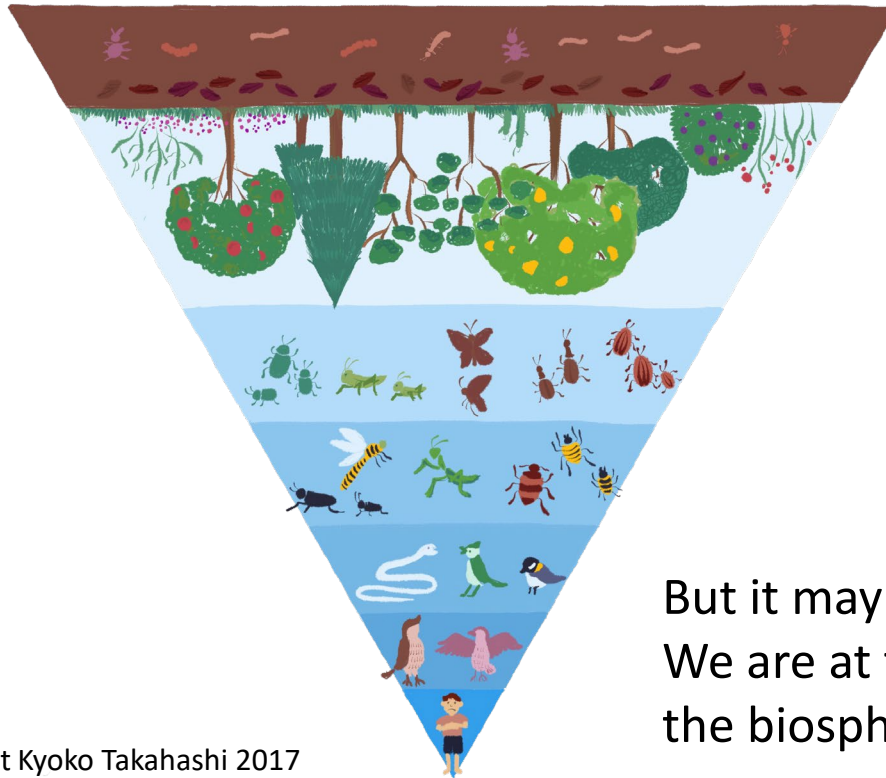
Some may believe that humans are at the top of the biosphere pyramid.



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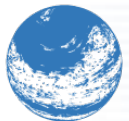


If we keep the present lifestyle, can we survive on the Earth? (2)

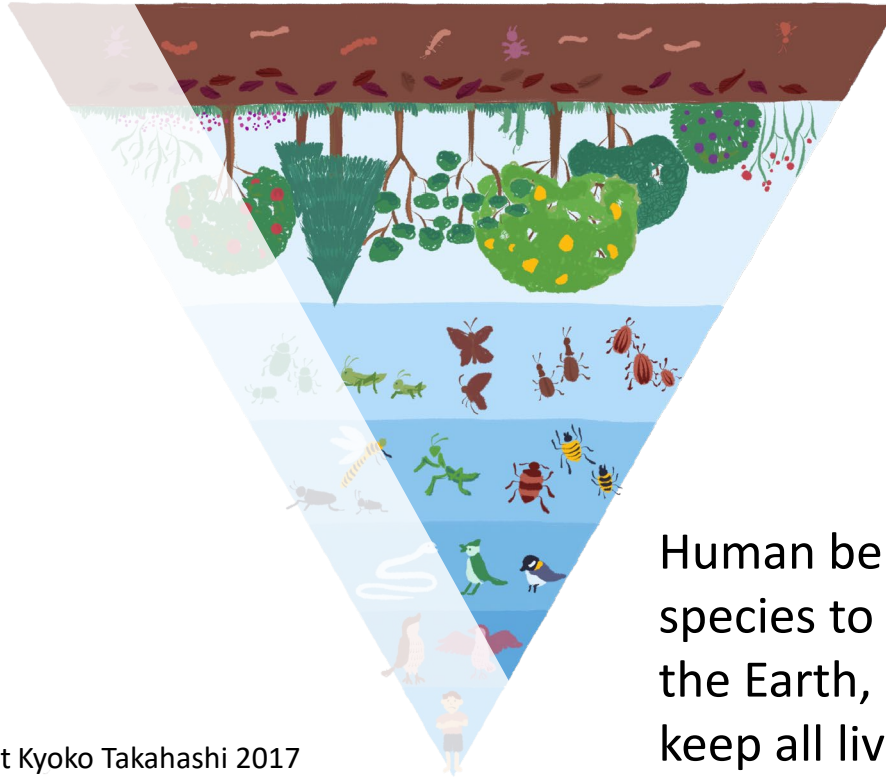


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But it may be not true.
We are at the bottom of
the biosphere pyramid.

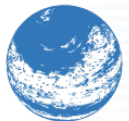


If we keep the present lifestyle, can we survive on the Earth? (3)



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Human beings would be the first species to be kicked out from the Earth, if the Earth could not keep all living beings.



If we keep the present lifestyle, can we survive on the Earth? (4)

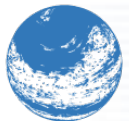


However, we cannot stop our regular life...
What can we do for the Earth in one hundred years?



Human beings would be the first species to be kicked out from the Earth, if the Earth could not keep all living beings.

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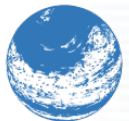


Background of One Earth Guardians Development Program

What can we do for the Earth in one hundred years?

We have heavily utilized the various resources of the Earth such as bacteria, plants, animals, and natural resources since the beginning of human history.

Because we placed a high priority on economic efficiency in industrial development, our irreplaceable Earth has been terribly damaged.



Background of One Earth Guardians Development Program

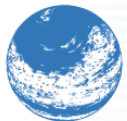
Why does School of Agriculture start this program?

Agriculture as an academic field covers all aspects of our daily life from food, clothing, housing, and more. In this field, establishment of sustainable scientific technology is an urgent issue.

In Agriculture, it is our mission to identify and solve the problems which we have caused by using enormous resources on the Earth. Our goal is better coexistence and symbiosis of living beings including humans.



Agriculture is just a human activity to borrow nature...



Goal of One Earth Guardians Development Program

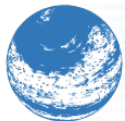
What can we do for the Earth in one hundred years?

The goals for this program are to :

- 1) cultivate human resources as "One Earth Guardians" who are capable of
 - finding all the problems which we have caused by abusing resources on the Earth
 - researching solutions
 - solving the problems as a team
- 2) develop research in this field as "One Earthology."

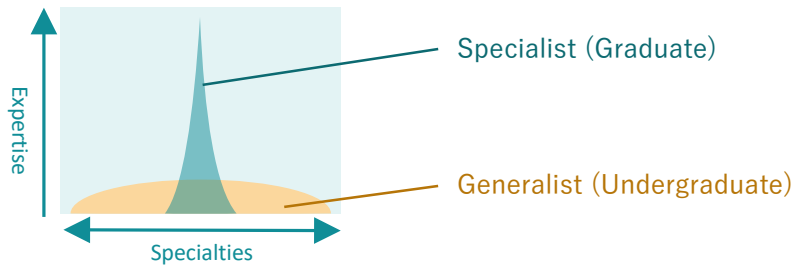
In other words, this education and research program is expected to provide answers for the question:

"What can we do for the Earth in one hundred years?"



Ideal model figures of "One Earth Guardians" (1)

Current Educational System



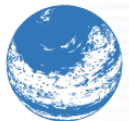
Bachelors

Doctors

Wide and shallow-generalists
and narrow and deep-specialists



Nowadays, students and researchers in Agriculture are too specialized in their own fields.



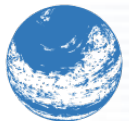
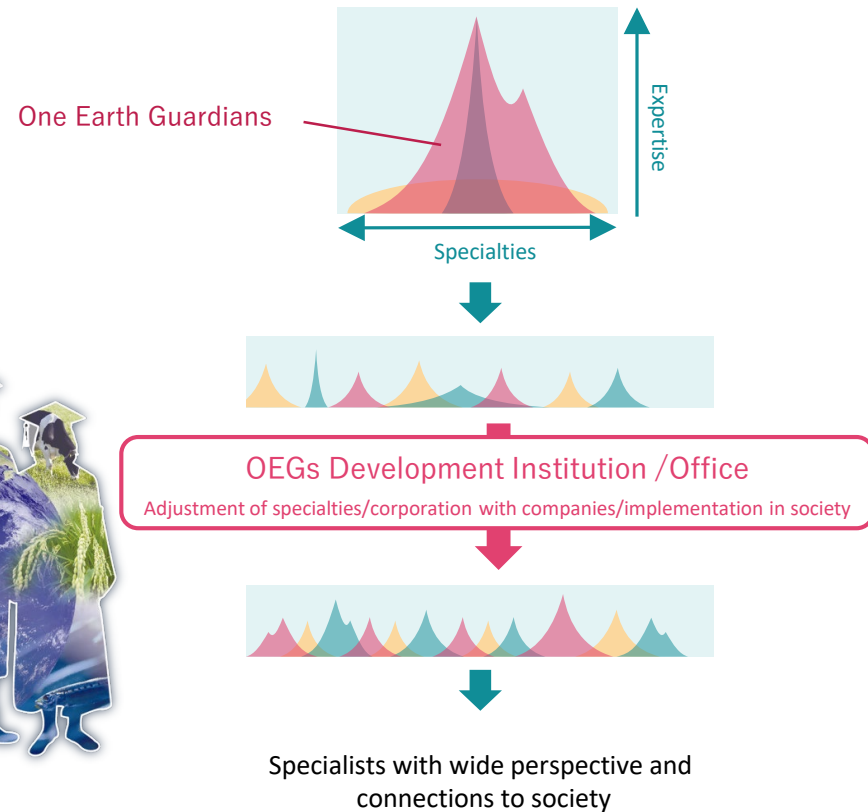
Ideal model figures of "One Earth Guardians" (2)

In this program, we cultivate human resources not only as experts in their own fields, but also as generalists with specialties who have a wide lens with which to view all of society.

Also, we will provide opportunities for those people to interact with people from various fields so that they can build connections to work together.

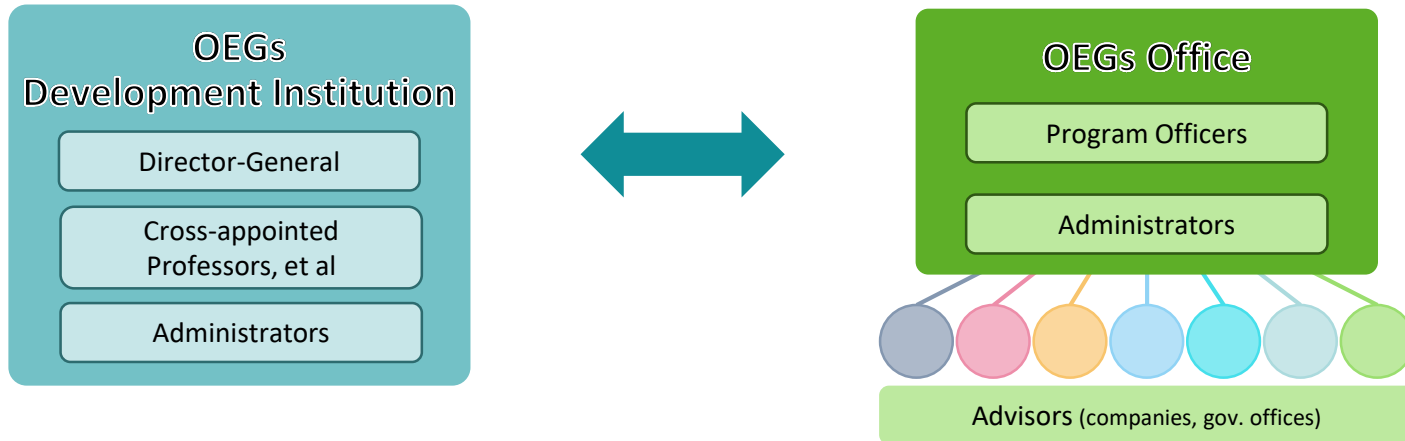


One Earth Guardians Educational Program



One Earth Guardians Development Institution and Office

To carry out this program, we have established the OEGs Development Institution and OEGs Office



OEGs Development Institution (Delivering lectures)

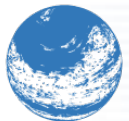
Director-General, Deputy Directors
Cross-appointed professors, Supporting professors
Invited lecturers from companies and Gov. offices
University office workers
University Research Administrators (URA)
Working group for basics curriculum

Around 50 university staff members support the program's idea

OEGs Office (Planning, Managing, and Conducting programs)

Program Officers
Advisors from companies and Gov. offices
University office workers
University Research Administrators

Around 50 stakeholders support the program's idea



Early activity of One Earth Guardians Development Program

2014

Apr Start of planning of the program by a small group

2017

Apr 1 Start of the program

Jul - Exchange of opinions with government office, foundations and companies on the program
(We have visited around 100 stakeholders)

Dec 1 Establishment of One Earth Guardians Development Institute/Office

Dec 12 1st round of One Earth Guardians Workshop
(23 companies, 2 government agencies, 24 our university staffs)

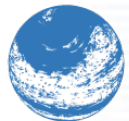
2018

Jan-Feb Pilot lectures and internships

Feb 28 2nd round of One Earth Guardians Workshop
(40 companies, 2 government agencies, 39 our university staffs)

Apr 1 **Start of the course**
Call of the 1st class and chose around 10 participants in the course

May 18 One Earth Guardians Development Program Kickoff Symposium
(around 280 participants)



One Earth Guardians Workshop

Workshop with supporting companies, foundations and institutions

1st round (12th December 2017): "Figures of One Earth Guardians to be cultivated"

2nd round (28th February 2018): "Paths how to cultivate human resources to be One Earth Guardians"



Scientists who have

points of view from sociology and economics,

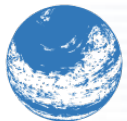
compliance,

flexibility,

toughness, and

ability to find agendas, think, and work together.

CONCLUSION



Curriculum policy of One Earth Guardians Development Program (1)

Basic One Earthology

Cultivate basic abilities to understand living beings and agendum of the field of environmental, food and natural resource sciences from a higher perspective.

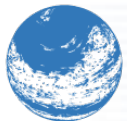


Environmental science
Food science
Natural material science
Microbiology
Plant sciences
Animal science
Mathematical science
Social sciences
Economic science

Partially for Applied One Earthology

Science communication
Basics for Science Communication in English
Writing a research proposal/article in English *etc.*

**Broad and higher
perspective**



Curriculum policy of One Earth Guardians Development Program (2)

Basic One Earthology

Cultivate basic abilities to understand living beings and agendum of the field of environmental, food and natural resource sciences from a higher perspective.



Practical One Earthology

Cultivate abilities to identify problems and develop their solution through practical internship in the real world and One Earthology seminar *etc.*

Internship type

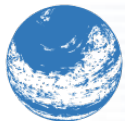


Mission type



**Broad and higher
perspective**

**Ability to identify and solve
problems on the Earth**



One Earthology Practical Internship

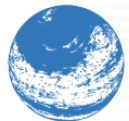
Experience the real world to find and solve the problems which do not have answers.

Before internship, URAs and university staffs prepare the program for each students discussing with supporting companies, farmers, foundations and government agencies.



At the farm where they stayed for 2 weeks

At the pharmaceutical venture company



One Earthology Practical Internship

We share experiences of each student with all of students, staffs, and supporting stakeholders. After that, the university staffs have a closed interview with each student to evaluate.

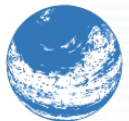


Criteria of evaluation

Step 1: the student can learn the present situation and find the problems.

Step 2: the student can accept the challenge to find the way to solve them for the future.

Step 3: the student can propose the paths to solve them from his/her major field and transmit them to the community.



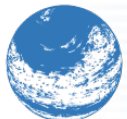
One Earthology Seminar

Discuss subject related with One Earthology (*ex.* Tree, Food, Life, Water) in a small group, students, university staff, and the participants from companies, foundations, and government agencies.



Three rules

- 1: Participants learn together.
- 2: Participants discuss subjects from broad and higher perspectives.
- 3: Participants look ahead and think of the future (Talanoa dialogue).



Curriculum policy of One Earth Guardians Development Program (3)

Basic One Earthology

Cultivate basic abilities to understand living beings and agendum of the field of environmental, food and natural resource sciences from a higher perspective.



Practical One Earthology

Cultivate abilities to identify problems and develop their solution through practical internship in the real world and One Earthology seminar *etc.*

Internship type



Mission type



Applied One Earthology

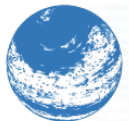
Cultivate abilities to transmit achievement to the community and change the concept of values from own society to all over the world.



**Broad and higher
perspective**

**Ability to identify and solve
problems on the Earth**

**Ability to promote
the network**



From SDGs to ESD and Beyond with One Earth Guardians Development Program

We believe that "Quality Education" (especially Scientific Literacy) will lead to the solutions for each goal, and will create the new academic field "One Earthology".

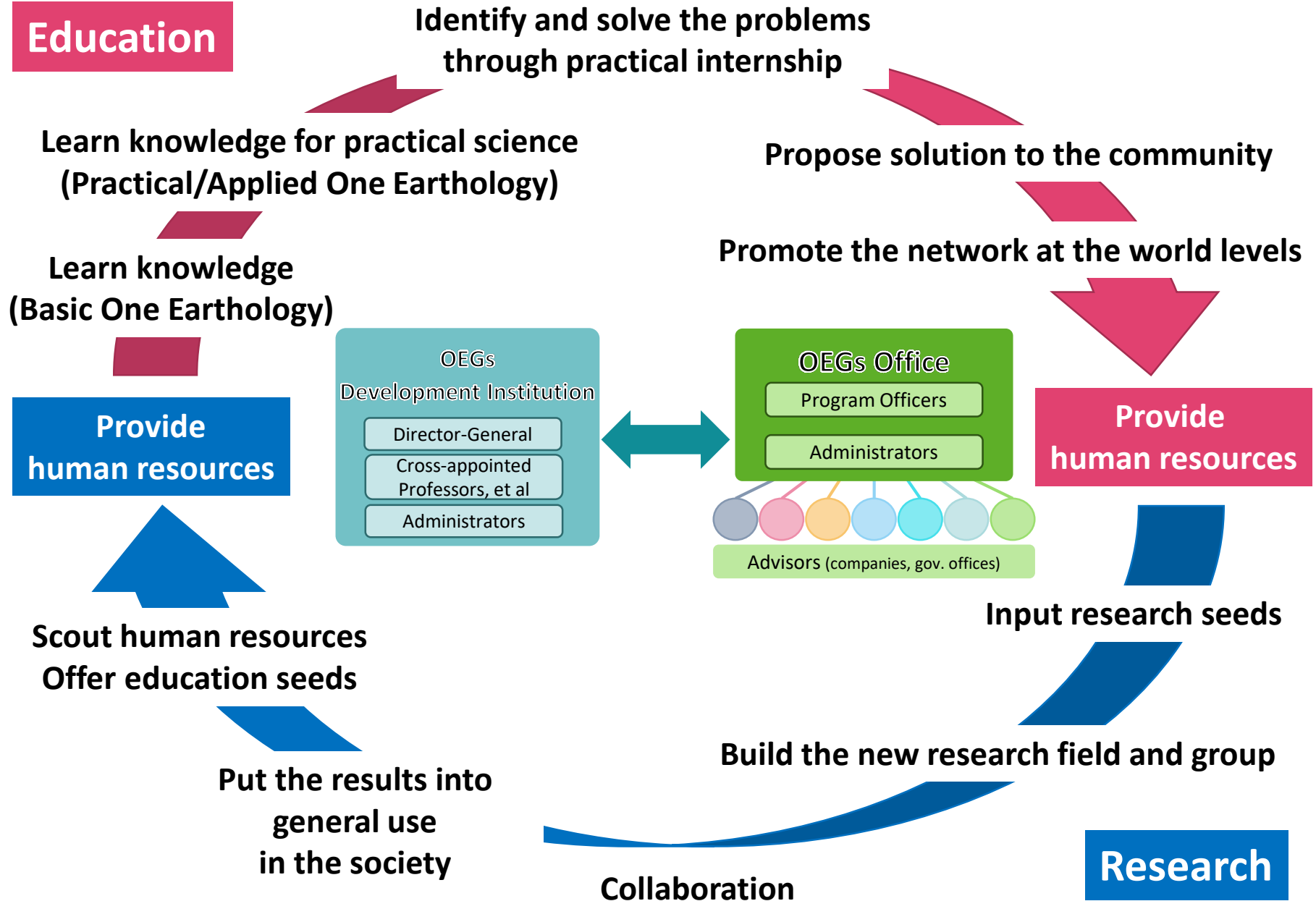
SUSTAINABLE DEVELOPMENT GOALS



ESD:
Education for
Sustainable
Development



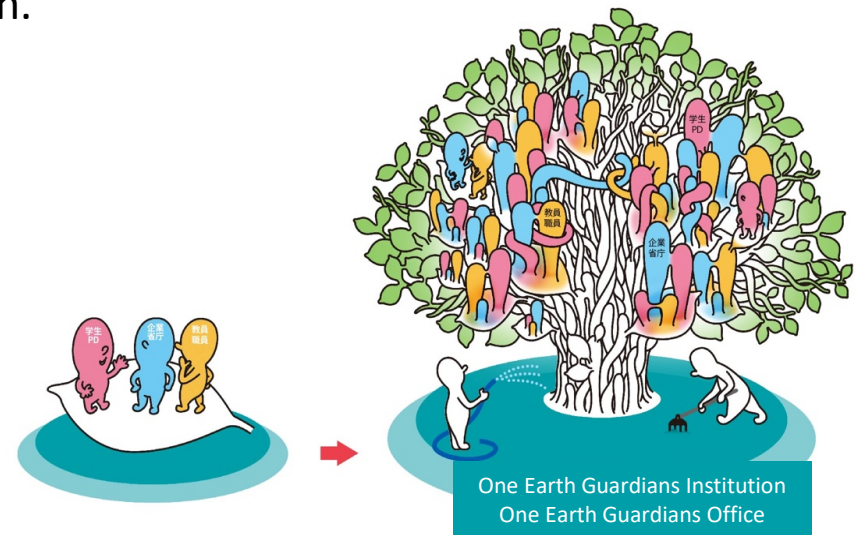
Cooperation between education and research in One Earth Guardians Development Program



What We Need from You, Stakeholders (1)

Please join us and create together the OEGs Development Program for the future Earth based "practical science"

- Debate and Contemplate together what kinds of people are needed to achieve our goals, and what kind of curriculum as "practical science" is required to do so.
- Share the expertise of each business site through guest lectures or facilitators of active learning, or through speaking out at the symposia.
- Set up internship programs which help students find issues in the "real world" and tips for solutions.
- Give advice on MA thesis and PhD dissertation.
- Hire One Earth Guardians in the near future.
- Support to run this program sustainably.



What We Need from You, Stakeholders (2)

Please join us and create together the OEGs Development Program for the future Earth based "practical science"

- Join the exclusive circle of communication consisting of students, professors, government officers, and business persons.
- Make proposals from business scenes on what issues we need to tackle.
- Become familiar with the latest contents of education and research.
- Be exposed to the needs and seeds of latest research and studies, which might evolve into joint research projects.
- Audit and participate in OEGs curriculum and become "One Earth Guardians".
- Contribute to Sustainable Development Goals (SDGs) as a person or a company

All participants and supporters are candidates of One Earth Guardians. We need long lasting support to keep paying attention to the issues on the Earth and seeking for solutions.

Let us together apply those solutions as "practical science".

Unique characters of the OEGs Development Program

- We know it will take long time before we see the effect of this new educational and research program, but we must start it right now.
- We need to expand this activity not only for the agriculture school of UTokyo but also for all mankind.
- Since we appreciate the value of "practical science", we cross the boundaries of ordinary educational programs at the university, and develop the new programs based on discussion with multi stakeholders of society.
- All supporters and advocates are candidates of "One Earth Guardians".
- It is neither to protect parochial vested interests, nor to expand commercial profits.
- We will build the system not for human beings alone, but for all living creatures on the Earth including those which are considered of no commercial value.
- We will carry out the paradigm shift from "Economic Capitalism" to "Natural Capitalism".
- Throughout the 100 years to come, we will go beyond the framework of departments, universities, and even countries to create "One Earthology".

Examples of conflicting concepts of values at the present society

Laboratory

VS.

Real world

High quality of food

VS.

Food loss

Economical value

VS.

Biological value

Large scale

VS.

Small scale

Deal

VS.

Field

Local

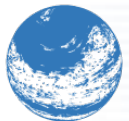
VS.

Global

Daily life

VS.

Life after 100 years



**If we keep the present lifestyle,
can we survive on the Earth?**



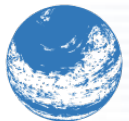
**We will discover a balance
between giving back to the Earth
and maintaining our lifestyle.**



**Integration of
conflicting concepts of values
using SCIENCE**



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Please join us !!

For the purpose of making the Earth in one hundred years happier than now, please join us and let us work together!!!



E-mail: one_earth_g@ofc.a.u-tokyo.ac.jp

https://www.u-tokyo.ac.jp/adm/fsi/en/sdgs_project023.html

