

ДЕПАРТАМЕНТ НАУЧНО-ТЕХНОЛОГИЧЕСКОЙ ПОЛИТИКИ  
И ОБРАЗОВАНИЯ при МСХ РФ

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Учебно-методическое пособие по английскому языку  
для студентов, магистров и аспирантов агрономических  
специальностей

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## Предисловие

Данное учебно-методическое пособие предназначено для практических занятий по английскому языку для студентов 2 курса по специальности «Агроэкология, агрохимия, почвоведение, органическое земледелие» агрономического факультета сельскохозяйственных вузов. Это пособие может быть использовано для обучения бакалавров и магистров при переходе на двухуровневый курс обучения высококвалифицированных специалистов сельского хозяйства и также для совершенствования английского языка аспирантами агрономических специальностей. В условиях высокой информативности современного общества умение оперативно реагировать на изменение окружающей среды невозможно без знания иностранных языков. В настоящее время востребованность высококвалифицированных специалистов на рынке труда, их конкурентоспособность в значительной степени зависит не только от знания и грамотной речи родного языка, но также от знания иностранных языков, умения свободно общаться на иностранном языке, навыков грамотной устной и письменной иноязычной речи, умения читать публицистические и научные тексты с целью извлекать и использовать полученную информацию в продуктивной речи и в научных целях, умения оперативно реагировать на изменение окружающей среды и запросы современного общества.

Цель и задачи данного учебно-методического пособия – обучение студентов чтению специальных текстов с использованием полученной информации в продуктивной речи, формирование лексических навыков и расширение тематического вокабуляра, развитие монологической речи и усиление аргументированности высказываний, развитие диалогической речи в форме дискуссий, способствование гражданской позиции в вопросах экологии, формирование коммуникативной компетенции и навыков делового, профессионального и научного общения.

Данное учебно-методическое пособие содержит темы для устно-разговорной практики по специальности, термины и новые слова по темам, специальные тексты из оригинальной литературы, практические задания, упражнения, контрольные вопросы и активные методы обучения, такие, как ролевые игры, круглые столы с обсуждением, тематические конференции, дискуссии, диалоги и т.д.

## Unit 1

### Ecological problems

#### I. Read the text and tell what ecological problems threaten the world.

##### Learn the new vocabulary:

excepting – кроме;  
exhaustion – истощение;  
calamity – бедствие;  
to occur – случаться, происходить;  
excessive exploitation – чрезмерная эксплуатация;  
an explosion – взрыв;  
a threat – угроза;  
to approach – приближаться;  
a destruction – разрушение;  
to impoverish – истощать, обеднять;  
pernicious – пагубный, вредный;  
negligent, prodigal relation – небрежное, расточительное отношение;  
versatile – многосторонний, непостоянный, изменчивый,  
famine – острая нехватка, недостаток, голод;  
to multiple – размножаться, увеличиваться;  
to perish – погибать, губить, портиться;  
scraps – отходы.

##### Ecological problems

Mankind have no enemies excepting themselves, calamities of mankind occur from their own irrationalism. Therefore for the present it is impossible to name as «a noosphere» - that is to say the world, where the mind is ruling - the thin layer of space on a surface of Globe, where a man dominates. Now this still rich and perfect world collapses because of excessive exploitation of it by mankind economic activity that has increased enormously in connection with demographic explosion that has taken place. However the world is in crisis and the problems of mankind are not solved by their intellectual leaders. The threat of ecological catastrophe approaches simultaneously from the different directions: pollution and impoverishing of the seas, oceans, rivers, underground waters, pollution and destruction of woods and agricultural grounds, pollution and change of an atmosphere, reduction of the protective ozone layer, pernicious changes of a climate, the rise of the ocean level, accumulation of deadly radioactive substances

made by uncountable atomic power stations, the impoverishing of the vegetative and animal world, exhaustion of resources of the planet. Obviously the reason is not simply, as speak, «in the negligent, prodigal relation of a man to a nature». Global and versatile character of the ecological crisis point out on fundamentality of its reasons and, accordingly, requires fundamental, radical changes in life of mankind. «Love and famine rule the world» it is the main law of biosphere, the main law of ecology. Because the ecology is not «a science about pollution» as many people think. It is unnecessary to confuse ecology and sanitation. Ecology is a BIOLOGICAL science, the science about interaction of a population of any biological species (it is unessential just of a human) - and the environment of its living. At this interaction the main characteristic of a population is its number and the main characteristic of environment is amount of vital resources necessary for life of this biological species. For example, if in closed volume the bacteria live, and they do not have enemies, they will multiplied and then will perish - or from famine, by having exhausted resources, necessary for their life, or, if they find new resources, they will multiplied further and will perished from poisoning of the environment with their own scraps.

#### II. Read the story and choose the sentences which are true to it.

1. Calamities of mankind occur from human rationalism.
2. Now our planet is still a rich and perfect world.
3. The problems of mankind are not solved by their intellectual leaders.
4. The threat of ecological catastrophe approaches from one direction.
5. The reason of ecological catastrophe is simple.
6. «Love and famine rule the world» it is the main law of biosphere.
7. Ecology is the science about interaction of human beings.
8. The main characteristic of environment is amount of vital resources necessary for people's life.

#### III. Match the columns:

|               |            |
|---------------|------------|
| Impoverishing | Enriching  |
| Negligent     | Constant   |
| Versatile     | Healthy    |
| Excessive     | Protective |
| Pernicious    | Helpful    |
| Prodigal      | Vital      |

**IV. These sentences are written in the wrong order. Try to recollect their succession in the text.**

1. The threat of ecological catastrophe approaches simultaneously from the different directions.
2. Mankind have no enemies excepting themselves, calamities of mankind occur from their own irrationalism.
3. Global and versatile character of the ecological crisis point out on fundamentality of its reasons and, accordingly, requires fundamental, radical changes in life of mankind.
4. Ecology is a biological science, the science about interaction of a population of any biological species and the environment of its living.
5. Now this still rich and perfect world collapses because of excessive exploitation of it by mankind economic activity that has increased enormously in connection with demographic explosion that has taken place.
6. «Love and famine rule the world» it is the main law of biosphere, the main law of ecology.
7. At this interaction the main characteristic of a population is its number and the main characteristic of environment is amount of vital resources necessary for life of this biological species.
8. Obviously the reason is not simply, as speak, «in the negligent, prodigal relation of a man to a nature».

**V. Answer the following questions:**

1. Does mankind have any enemies?
2. Is it possible it to name our planet as «a noosphere» for the present?
3. Why do collapses take place nowadays?
4. Are the problems of mankind solved by their intellectual leaders?
5. From what directions does the threat of ecological catastrophe approach?
6. What is the reason of ecological catastrophe?
7. How do you understand the main law of biosphere and ecology?
8. Are there any ways to save the planet?

**VI. Discuss ecological problems in small groups and the way to solve these problems.**

**VII. Can you agree with all these definitions? If you can't, read the following text and try to answer the question: "What is ecology?"**

The dictionaries tell us that ecology is a scientific study of the natural

relations of plants, animals, and people to each other and their surroundings. Ecology is more than a branch of biology. It brings together natural and social sciences, philosophy and it studies nature as a whole. This "holistic" approach makes it a broader subject. Its main theme and major idea is interdependence of all living beings.

For centuries people have been in the pursuit of their "proper role" on Earth – extending their power over nature as far as possible. As a result of it people have become a threat to their own existence. And ecological situation needs drastic changes in its treatment. That is why ecological thinking has to be integrated into politics. All policy- making must take the environment into account in order to avert global disaster.

Ecology implies global solidarity – that we are all responsible for everyone alive today, for future generations, and for the Earth as our home. It implies a different set of values: we must stop to assess people by their "efficiency", "productivity" and start thinking about HEALTH, HARMONY, BEAUTY, NATURE, JUSTICE, EQUALITY. It implies "sustainable development", improving the quality of human life while preserving and supporting ecosystems.

*Vocabulary:*

surrounding – окружение, окружающая среда;  
"holistic" approach – целостный подход;  
interdependence – взаимозависимость;  
pursuit – поиск; to extend – расширить, увеличивать;  
existence – существование;  
drastic changes – коренные изменения;  
to integrate – интегрировать;  
to imply – подразумевать;  
value – ценность ;  
to assess – оценивать;  
sustainable – устойчивый;

**VII. Complete the sentences using the text.**

1. Ecology is a scientific study of ...
2. It brings together natural and social sciences...
3. Its main theme and major idea is ...
4. For centuries people have been in the pursuit of ...
5. As a result of it people have become ...

6. Ecological situation needs ...

7. Ecology implies ...

**IX. In the text find the synonyms to the following words and phrases.**

- \* natural relations
- \* surrounding
- \* to bring together
- \* to extend
- \* drastic changes
- \* to take into account
- \* to imply
- \* sustainable development
- \* to improve
- \* to preserve

**X. Argue the following statements (agree or disagree).**

1. Ecology is protection and preservation of plants and animals and their habitat.

2. Ecological situation needs drastic changes in its treatment.

3. Ecology can provide exact guidelines and analytical tools to farm intensively all the Earth's resources.

4. Ecology task is to extend human power over nature as far as possible.

5. Ecology implies global solidarity – that we are all responsible for everyone alive today, for future generations, and for the Earth as our home.

**X. Answer the following questions to the text.**

1. How do dictionaries define ecology?
2. Why does ecology bring all sciences together?
3. Why is so important to understand the way nature works?
4. Why has ecological thinking to be integrated into politics?
5. What is sustainable development?

**XI. Give the summary of the article in 5-7 sentences using as many new words as possible.**

**XII. Make up either a written story or an oral report about ecology, ecological situation and problems that the world faces nowadays.**

## Unit 2 Organic agriculture

**I. Read the text on environmental benefits of organic agriculture and tell what they are.**

**Learn new words:**

sustainability over the long term – устойчивое развитие, устойчивое ведение сельского хозяйства на долгий срок;

medium -long-term effect – среднее и продолжительное воздействие;

a proactive approach – упреждающий подход;

as opposed to – в отличие, в противоположность, в сравнении;

to treat problems after they emerge – иметь дело с проблемами после того, как они возникают;

to encourage soil fauna and flora – поддерживать, сохранять живые организмы в почве;

to create more stable system – создавать более устойчивую систему;

in turn – в свою очередь;

retentive abilities – способность сохранять, удерживать;

to enhance – увеличивать, усиливать, повышать;

is exposed to erosive forces – подвергаться эрозии;

to prohibit – запрещать;

a conversion – превращение, переход, изменение;

a restorative measure – укрепляющие, восстанавливающие меры;

to mitigate the greenhouse effect – смягчать, уменьшать парниковый эффект;

to sequester carbon – изолировать, уничтожать углерод;

favoring carbon storage – подходящее, удобное накопление углерода.

### Sustainability over the long term

Many changes observed in the environment are long term, occurring slowly over time. Organic agriculture considers the medium-and long-term effect of agricultural interventions on the agro-ecosystem. It aims to produce food while establishing an ecological balance to prevent soil fertility or pest problems. Organic agriculture takes a proactive approach as opposed to treating problems after they emerge.

**Soil.** Soil building practices such as crop rotations, inter-cropping, symbiotic associations, cover crops, organic fertilizers and minimum tillage are central to organic practices. These encourage soil fauna and flora, improving soil formation and structure and creating more stable systems. In turn, nutrient and energy cycling is increased and the retentive abilities of the

soil for nutrients and water are enhanced, compensating for the non-use of mineral fertilizers. Such management techniques also play an important role in soil erosion control. The length of time that the soil is exposed to erosive forces is decreased, soil biodiversity is increased, and nutrient losses are reduced, helping to maintain and enhance soil productivity.

**Water.** In many agriculture areas, pollution of groundwater courses with synthetic fertilizers and pesticides is a major problem. As the use of these is prohibited in organic agriculture, they are replaced by organic fertilizers (e.g. compost, animal manure, green manure) and through the use of greater biodiversity, enhancing soil structure and water infiltration. Well managed organic systems with better nutrient retentive abilities, greatly reduce the risk of groundwater pollution. In some areas where pollution is a real problem, conversion to organic agriculture is highly encouraged as a restorative measure.

**Air.** Organic agriculture reduces non-renewable energy use by decreasing agrochemical needs. Well managed organic systems with better nutrient retentive abilities, greatly reduce the risk of groundwater pollution. Organic agriculture contributes to mitigating the greenhouse effect and global warming through its ability to sequester carbon in the soil. Many management practices used by organic agriculture (e.g. minimum tillage, returning crop residues to the soil, the use of cover crops and rotations), increase return of carbon to the soil, raising productivity and favoring carbon storage.

**II. Change Active Voice into Passive:**

|               |  |
|---------------|--|
| to observe    |  |
| to consider   |  |
| to improve    |  |
| to enhance    |  |
| to contribute |  |
| to mitigate   |  |

**III. Change Passive Voice into Active:**

|               |  |
|---------------|--|
| is increased  |  |
| is exposed    |  |
| are enhanced  |  |
| are decreased |  |
| is prohibited |  |
| is encouraged |  |
| are replaced  |  |

**IV. Fill in the blanks:**

1. Organic agriculture considers \_\_\_\_\_ term effect of the agricultural interventions on agro-ecosystem.
2. It aims to produce food \_\_\_\_\_ to prevent soil fertility or pest problems.
3. Organic agriculture takes \_\_\_\_\_ to treating problems after they emerge.
4. Soil building practices such as \_\_\_\_\_ are central to organic practices.
5. These encourage soil \_\_\_\_\_ and creating more stable system.
6. In turn, nutrient and energy cycling is increased and \_\_\_\_\_ compensating for the non-use of mineral fertilizers.
7. The length of time that the soil is exposed to erosive forces is decreased \_\_\_\_\_ helping to maintain and enhance soil productivity.
8. In many agriculture areas, pollution of groundwater courses \_\_\_\_\_ is a major problem.
9. As the use of these is prohibited in organic agriculture, they are replaced \_\_\_\_\_ enhancing soil structure and water infiltration.
10. Well managed organic systems \_\_\_\_\_, greatly reduce the risk of groundwater pollution.
11. Organic agriculture contributes \_\_\_\_\_ through its ability to sequester carbon in the soil.
12. Many management practices used by organic agriculture \_\_\_\_\_, increase return of carbon to the soil, raising productivity and favoring carbon storage.

**V. Say if these sentences are true (T) or false (F).**

1. Organic agriculture considers a short-term effect of agricultural interventions on the agro-ecosystem.
2. It aims to produce food while establishing an ecological balance to prevent soil fertility or pest problems.
3. Soil building practices such as crop rotations, inter-cropping, symbiotic associations, cover crops, organic fertilizers and minimum tillage are central to organic practices.

4. Well managed organic systems with better nutrient retentive abilities, greatly enhance the risk of groundwater pollution.

5. Many management practices used by organic agriculture (e.g. minimum tillage, returning crop residues to the soil, the use of cover crops and rotations), increase return of carbon to the soil, raising productivity and favoring carbon storage.

**VI. Make different questions on the text:**

e.g. 1. Are many changes observed in the environment occurring slowly over time?

2. Does it aim to produce food while establishing an ecological balance or disturbance to prevent soil fertility?

3. Organic agriculture takes a proactive approach as opposed to treating problems after they emerge, doesn't it?, etc.

**VII. Answer the following questions.**

**VIII. Give the summary of the text in 10 and then in 5 sentences.**

**IX. Discuss environmental benefits of organic agriculture, including soil, water, air in small groups.**

**X. Read the information on ecological services and name the most effective.**

**Ecological services.** The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem that are vital for both agricultural production and nature conservation. Ecological services derived include soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, pollination and habitats. By opting for organic products, the consumer through his/her purchasing power promotes a less polluting agricultural system. Benefits of organic agriculture to the environment in terms of natural resource are increased.

*Vocabulary:*

to favor – благоприятствовать, помогать, поддерживать,

interaction – взаимодействие,

vital – жизненно важный,

derive – извлечение, получение, наличие,

pollination – опыление,

habitat – естественная среда,

hidden cost – скрытый вклад.

**XI. In the text find synonyms to the following words and phrases.**

**Use them in the sentences of your own.**

\* influence

\* nature protection

\* actual

\* choosing

\* buying abilities

\* advantage

\* enhance

**XII. Think and answer the following questions.**

1. What is the main idea of the article?

2. What do ecological services in organic agriculture include?

3. What benefits to the environment are increased?

**XIII. Compare ecological services of the USA with those of Russia.**

**Unit 3**

**Biodiversity**

**I. Read the text and say how suitable habitat for wild life is created.**

**Learn new words:**

custodian – сторож, хранитель;

to prefer – предпочитать;

resistance – сопротивляемость;

resilience – упругость, способность быстро восстанавливаться;

frequent use – редкое использование;

pollinators – опылители;

pest predators – хищные насекомые;

to favor – благоприятствовать;

hidden – скрытый.

**Biodiversity.** Farmers are both custodians and users of biodiversity at all levels. At the gene level, traditional and adapted seeds and breeds are preferred for their greater resistance to diseases and their resilience to climatic stress. At the species level, diverse combinations of plants and animals optimize nutrient and energy cycling for agricultural production. At the ecosystem level, the maintenance of natural areas within and around organic fields and absence of chemical inputs create suitable habitats for wildlife. The frequent use of under-utilized species (often as rotation crops

to build soil fertility) reduces erosion of agro-biodiversity, creating a healthier gene pool - the basis for future adaptation. The provision of structures providing food and shelter, and the lack of pesticide use, attract new or re-colonizing species to the organic area (both permanent and migratory), including wild flora and fauna (e.g. birds) and organisms beneficial to the organic system such as pollinators and pest predators. The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem, which are vital for both agricultural production and nature conservation. Ecological services derived include soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, predation, pollination and habitats. By opting for organic products, the consumer through his/her purchasing power promotes a less polluting agricultural system. The hidden costs of agriculture to the environment in terms of natural resource degradation are reduced.

## II. Fill in the blanks:

1. Farmers are both \_\_\_\_\_ of biodiversity at all levels.
2. At the gene level, \_\_\_\_\_ are preferred for their greater resistance to diseases and their resilience to climatic stress.
3. At the species level, \_\_\_\_\_ optimize nutrient and energy cycling for agricultural production.
4. At the ecosystem level, \_\_\_\_\_ and absences of chemical inputs create suitable habitats for wildlife.
5. The frequent use of under-utilized species \_\_\_\_\_ creating a healthier gene pool – the basis for future adaptation.
6. \_\_\_\_\_ attract new or re-colonizing species to the organic area, including wild flora and fauna and organisms beneficial to the organic system such as pollinators and pest predators.
7. The impact of organic agriculture on natural resources favors \_\_\_\_\_ and nature conservation.
8. Ecological services derived include \_\_\_\_\_.
9. By opting for organic products, the consumer \_\_\_\_\_ promotes a less polluting agricultural system.

## III. Find the false sentences and correct them using the information from the text.

1. Farmers are both custodians and users of biodiversity at all levels.

2. At the gene level, traditional and adapted seeds and breeds are preferred for their smaller resistance to diseases and their resilience to climatic stress.

3. At the species level, diverse combinations of plants and animals minimize nutrient and energy cycling for agricultural production.

4. At the ecosystem level, the maintenance of natural areas within and around organic fields and absence of chemical inputs create suitable habitats for wildlife.

5. The frequent use of under-utilized species (often as rotation crops to build soil fertility) enhances erosion of agro-biodiversity, creating a healthier gene pool - the basis for future adaptation.

6. The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem, which are vital for both agricultural production and nature conservation.

7. The hidden costs of agriculture to the environment in terms of natural resource degradation are enhanced.

## IV. Give the Russian equivalents for the following words and phrases.

Custodians and users of biodiversity; preferred for their greater resistance; resilience to climatic stress; diverse combinations of plants and animals; maintenance of natural areas; chemical inputs; suitable habitats for wildlife; frequent use of under-utilized species; healthier gene pool; re-colonizing species; beneficial to the organic system; to favor; carbon sequestration; nutrients cycling; predation; pollination; purchasing power; in terms of natural resource degradation; hidden costs of agriculture to the environment.

## V. Answer the following questions.

1. Who are farmers for the environment?
2. What seeds and breeds are preferred at the gene level and why?
3. What combinations of plants and animals optimize nutrient and energy cycling for agricultural production at the species level?
4. Does the maintenance of natural areas within and around organic fields and absence of chemical inputs create suitable habitats for wildlife or not at the ecosystem level?
5. The frequent use of under-utilized species (often as rotation crops to build soil fertility) reduces erosion of agro-biodiversity, creating a healthier gene pool – the basis for future adaptation, does it?



6. What species attract to the organic area and why?
7. What favors interactions within the agro-ecosystem?
8. What do ecological services include?
9. How do consumers promote a less polluting agricultural system?
10. Are the hidden costs of agriculture to the environment in terms of natural resource degradation reduced or enhanced?

**VI. Fill in the table and speak on influences of organic and conventional farms on nature conservation, their advantages and disadvantages and ecological services:**

|                    | advantages | disadvantages | ecological services |
|--------------------|------------|---------------|---------------------|
| Organic farms      |            |               |                     |
| Conventional farms |            |               |                     |

**VII. Read the text and tell if organic farmers can produce enough food for everybody.**

**Learn new words:**

- ability – возможность;  
 to access – получать;  
 having to rely – вынуждены полагаться;  
 external input – вклад извне;  
 to substitute – заменить;  
 land tenure – землепользование;  
 constraint – принуждение, напряженность;  
 simultaneously – одновременно;  
 to outperform – делать лучше, чем другой;  
 circumstance – условие, обстоятельство.

**Food security.** Food security is not only a question of the ability to produce food, but also of the ability to access food. Global food production is more than enough to feed the global population; the problem is getting it to the people who need it. In marginalized areas, organic farmers can increase food production by managing local resources without having to rely on external inputs or food distribution systems over which they have little control and/or access. It is to be noted that although organic management

of natural resources can substitute external agricultural inputs, land tenure remains a main constraint to the labor investments needed for organic agriculture. Organic farms grow a variety of crops and livestock in order to optimize competition for nutrients and space between species: this results in less chance of low production or yield failure in all of these simultaneously. This can have an important impact on local food security and resilience. In rain-fed systems, organic agriculture has demonstrated to outperform conventional agricultural systems under environmental stress conditions. Under the right circumstances, the market returns from organic agriculture can contribute to local food security by increasing family income.

**VIII. Say if these statements true (T) or false (F) according to the article. Correct the false ones.**

1. Food security is only a question of the ability to produce food.
2. Global food production is a problem to feed the global population.
3. In marginalized areas, organic farmers can increase food production only by managing local resources.
4. Land tenure remains a main advantage to the labor investments needed for organic agriculture.
5. Organic farms grow a variety of crops and livestock in order to minimize competition for nutrients and space between species.
6. Organic agriculture has demonstrated to outperform conventional agricultural systems under environmental stress conditions.
7. The market returns from organic agriculture can contribute to local food security by decreasing family income.

**IX. Complete the following sentences using the information from the text.**

1. Food security is not only a question of the ability to produce food, but ...
2. Global food production is more than enough to feed the global population; the problem is ...
3. In marginalized areas, organic farmers can increase food production by ...
4. It is to be noted that although organic management of natural resources can substitute external agricultural inputs, land tenure remains ...
5. Organic farms grow a variety of crops and livestock in order to ...
6. This can have an important impact on ...
7. In rain-fed systems, organic agriculture has demonstrated ...
8. Under the right circumstances, the market returns from organic agriculture can contribute ...

## X. Give English equivalents for the following words and phrases.

Обеспечение продуктами питания; возможность получать пищу; производство продуктов питания во всем мире; на отдаленных территориях; управление, распоряжение местными ресурсами; система распределения продуктов питания; основная преграда; различные сельскохозяйственные культуры и сельскохозяйственные животные; увеличить конкуренцию; важное влияние; в соответствующих условиях; вносить вклад; увеличивать доход.

## XI. Answer the following questions.

1. Is food security only a question of the ability to produce food or not?
2. What are problems of global food production?
3. How can organic farmers increase food production in marginalized areas?
4. What remains a main constraint to the labor investments needed for organic agriculture?
5. What do organic farms grow in order to optimize competition for nutrients and space between species?
6. Can it have an important impact on local food security and resilience?
7. What has organic agriculture demonstrated in rain-fed systems?
8. What can the market returns from organic agriculture contribute under the right circumstances?

## XII. Interview each other on food security and discuss it using the following plan:

1. How to gain the ability to produce food to the people who need it.
2. The ways to access food.
3. Food production in marginalized areas.
4. Organic management of natural resources.
5. Market returns from organic agriculture.

### Unit 4

#### THE ORGANIC CONNECTION

##### I. Read the following text and say what organic connection is.

##### Learn new vocabulary:

reverse the trend of negative threats – изменять, аннулировать негативную тенденцию;

to derive livelihoods – получать средства к жизни;

production-conservation challenge – задача производить и сохранять;  
stewardship efforts – усилия по управлению;  
economic viability – экономическая жизнеспособность;  
restore marginal and abandoned rural areas – восстанавливать не рентабельную и необжитую сельскую местность;  
to valorize – устанавливать государственные цены;  
to retain forest structures – сохранять леса;  
under tree canopy – под навесом деревьев;  
to harbor – дать приют, убежище;  
land carrying-capacity – способность восстанавливать землю;  
temporal wetlands – временное увлажнение земель.

#### THE ORGANIC CONNECTION

Choices in agricultural management can enhance or threaten domesticated and wild biodiversity. Encouraging organic agriculture within and around protected areas can reverse the trend of negative threats to biodiversity, while allowing local residents to derive livelihoods from their lands. Organic agriculture depends on ecosystem services delivered through proper management of biodiversity. It simultaneously delivers ecosystem services to wider environments, including non-marketable public goods such as environmental health and landscape connectivity. It can meet the production-conservation challenge head-on by:

- *Promoting market-based incentives* that compensate farmers for their environmental stewardship efforts, thus maintaining their economic viability.

- *Restoring marginal and abandoned rural areas* by valorizing underutilized plants and animals (such as in pastures) appreciated by organic consumers.

- *Replacing degrading agricultural practices* with approaches that prevent wildlife poisoning and detoxify environments.

- *Reducing protected areas fragmentation* by enhancing the habitat value of agricultural landscapes.

- *Reversing deforestation by growing crops* (coffee, cacao) under tree canopy, thus retaining forest structures that harbor endemic and migrant species.

- *Enhancing land carrying-capacity* for both wildlife and agricultural production by creating temporal wetlands (rice) suitable for nesting and feeding of wetland-dependent or migrant species.

**II. Find the false sentences and correct them using the information from the text.**

1. Encouraging organic agriculture within and around protected areas can reverse the trend of positive approach to biodiversity.
2. Organic agriculture depends on ecosystem services delivered through proper management of biodiversity.
3. Promoting market-based incentives do not compensate farmers for their environmental stewardship efforts.
4. Marginal and abandoned rural areas can not be restored.
5. Degrading agricultural practices can be replaced.
6. Reducing protected areas fragmentation is enhanced.
7. Deforestation is reversed by growing crops.
8. Land carrying-capacity for both wildlife and agricultural production are not enhanced.

**III. Complete the following sentences using the information from the text.**

1. Choices in agricultural management can enhance or threaten \_\_\_\_\_
  - a) domesticated biodiversity;
  - b) wild biodiversity;
  - c) both diversity.
2. Encouraging organic agriculture within and around protected areas can reverse \_\_\_\_\_
  - a) the trend of positive threats to biodiversity;
  - b) the trend of negative threats to biodiversity.
3. Organic agriculture depends on ecosystem services delivered through \_\_\_\_\_
  - a) proper management of biodiversity;
  - b) poor management of biodiversity.
4. It simultaneously delivers ecosystem services to wider environments, including \_\_\_\_\_
  - a) marketable public goods;
  - b) environmental health and landscape connectivity.
- 5) It can meet the production-conservation challenge head-on by \_\_\_\_\_
  - a) replacing degrading agricultural practices;
  - b) promoting market-based incentives;
  - c) ruining marginal and abandoned rural areas.

**IV. Find the Russian equivalents to the following words and phrases.**

Organic connection; choices in agricultural management; encouraging organic agriculture; proper management of biodiversity; to deliver; environmental health; landscape connectivity; promoting market-based incentives; to maintain; under-utilized plants; to appreciate; to poison and detoxify environments; habitat value of agricultural landscapes; to reverse deforestation; to create temporal wetlands; wetland-dependent or migrant species.

**V. Answer the following questions:**

1. Can choices in agricultural management enhance or threaten domesticated and wild biodiversity?
2. Encouraging organic agriculture within and around protected areas can't reverse the trend of negative threats to biodiversity, can it?
3. What does organic agriculture depends on?
4. How does it simultaneously deliver ecosystem services to wider environments?
5. How is the economic viability maintained?
6. Can marginal and abandoned rural areas be restored?
7. What approaches can degrading agricultural practices be replaced with?
8. How can protected areas fragmentation be reduced by?
9. Can deforestation be reversed?
10. How can land carrying-capacity be enhanced?

**VI. Speak on organic agriculture in protected areas in small groups on following situations:**

- 1) Safer alternatives to some natural products are needed.
- 2) Environmental, social and safety requirements in the food supply chain are growing worldwide.
- 3) Traditional and pioneers farmers, pastoralists and forest dwellers hold agro-ecological knowledge.
- 4) Collaboration between environmental and agricultural constituencies is emerging.
- 5) The challenge for conservationists and agriculturalists.

**VII. Read the text and say how agriculture must provide food to growing world population.**

**Learn the new words:**

poverty alleviation – снижение уровня бедности;  
 forest dwellers – обитатели лесистой местности;  
 indigenous people – местное население;  
 high interdependence – высокая взаимозависимость

**INTER-DEPENDENCE**

Agriculture must provide food to a growing world population, including today's 840 million hungry people. Protected areas can contribute to food security and poverty alleviation. Poor land use, careless agricultural management and wrong policy incentives damage natural habitats and accelerate the loss of plants, animals and ecological processes that serve as the foundation of agricultural productivity. Farmers, forest dwellers, including a large proportion of indigenous people, are the main inhabitants and users of protected areas, as well as of lands connecting these areas. They manage genes, species and ecosystems by their decisions on what to produce and how to produce food. Protected areas today occupy 11 percent of Earth cover, in a landscape dominated by the agriculture sector; in fact, more than 40 percent of the land's surface is occupied by croplands and pastures. Despite this high interdependence between nature conservation and agriculture, community approaches to protected areas management touch on the periphery of agricultural activities.

**VII. Complete the following statements:**

1. Agriculture must provide food to a growing world population, including...
2. Protected areas can contribute to ...
3. Poor land use, careless agricultural management and wrong policy incentives damage natural habitats and accelerate ...
4. .... are the main inhabitants and users of protected areas.
5. Protected areas today occupy ....
6. Despite this high interdependence between nature conservation and agriculture, community approaches to protected areas management touch on .....

**VIII. Write for true (T) and for false (F) next to the sentences below.**

1. Agriculture must provide food to a growing world population, including today's 840 million hungry people.
2. Protected areas can not contribute to food security and poverty alleviation.

3. Poor land use, careless agricultural management and wrong policy incentives damage natural habitats and accelerate the loss of plants, animals and ecological processes that serve as the foundation of agricultural productivity.

4. Tourists are the main inhabitants and users of protected areas, as well as of lands connecting these areas.

5. Tourists manage genes, species and ecosystems by their decisions on what to produce and how to produce food.

6. Protected areas today occupy 11 percent of Earth cover, in a landscape dominated by the agriculture sector; in fact, more than 40 percent of the land's surface is occupied by croplands and pastures.

7. Despite this high interdependence between nature conservation and agriculture, community neglects to protected areas management touch on the periphery of agricultural activities.

**X. Make up a written story or an oral report on how protected areas can contribute to food security and poverty alleviation. Try to make it sound lively, interesting for the audience and questions provoking. Use the new words you learned from this unit and from the previous units.**

**Unit 5**

**I. Read the text and say how to supply market demand by environmentally-friendly products.**

**Learn new vocabulary:**

To exceed – превышать;  
 enhancement – увеличение, усиление, улучшение;  
 stewardship – управление;  
 requirements – требования;  
 to indicate – показывать, указывать, означать, свидетельствовать;  
 to reward – награждать, вознаграждать;  
 restoration ecology – восстановление экологии;  
 infancy – ранняя стадия развития.

Market demand exceeds supply and the sector is governed by detailed standards and regulations. Safer alternatives to some natural products are needed. Develop organic standards for biodiversity and realistic on-farm habitat enhancement. Environmental stewardship is compensated by premium prices for environmentally-friendly products. Organic agriculture

has been steadily growing and continues to grow. Environmental, social and safety requirements in the food supply chain are growing worldwide. Organic labels indicate the application of minimal standards and other quality labels allow synthetic input use. Promote labels that recognize and reward different levels of stewardship. Traditional and pioneers farmers, pastoralists and forest dwellers hold agro-ecological knowledge. Empirical knowledge of interactions in the food chain improves farm productivity and maintains domesticated and wild diversity. The application of restoration ecology and landscape ecology is in its infancy. Develop the agro-ecological research agenda based on intensive local science (formal and informal).

**II. Find the words in the text to complete the following statements.**

1. Market demand exceeds supply and the sector is governed by \_\_\_\_\_ and regulations.
2. Develop organic standards for biodiversity and \_\_\_\_\_ enhancement.
3. Environmental stewardship is compensated by \_\_\_\_\_ for environmentally-friendly products.
4. \_\_\_\_\_ requirements in the food supply chain are growing worldwide.
5. Organic labels indicate the application of \_\_\_\_\_ standards and other quality labels allow synthetic input use.
6. Traditional and pioneers farmers, pastoralists and forest dwellers hold \_\_\_\_\_ knowledge.
7. Empirical knowledge of interactions in the food chain \_\_\_\_\_ farm productivity and maintains domesticated and wild diversity.

**III. Read the text and find sentences which are true to the text.**

**Correct the false ones.**

1. Market demand exceeds supply and the sector is governed by detailed standards and regulations.
2. Safer alternatives to some natural products are not needed.
3. Develop non-organic minimum standards for biodiversity and on-farm habitat enhancement.
4. Environmental stewardship is compensated by high prices for environmentally-friendly products.
5. Organic agriculture has been steadily growing and continues to grow.
6. Environmental, social and safety requirements in the food supply chain are disappearing worldwide.

7. Promote labels that recognize and reward different levels of stewardship.

8. The application of restoration ecology and landscape ecology is developing very fast.

9. Develop the agro-ecological research agenda based on intensive local science.

**IV. Find the synonyms in the text to the words and phrases below.**

- to guide –
- to be necessary –
- improvement –
- environmentally safe –
- use –
- to acknowledge –
- to keep –
- to enhance –

**V. Answer the following questions.**

1. Does market demand exceed supply?
2. What is the sector is governed by ?
3. Are needed safer alternatives to some natural products or not?
4. What should be developed for biodiversity and realistic on-farm habitat enhancement?
5. Environmental stewardship is compensated by premium prices for environmentally – friendly products, isn't it?
6. What requirements in the food supply chain are growing worldwide?
7. What standards do organic labels indicate?
8. What improves farm productivity and maintains domesticated and wild diversity?

**VI. Split into pairs and make up a dialogue between a professional organic expert and a young farmer who is eager to succeed in organic farming and production of environmentally-friendly products.**

**VII. Read the text and say what should be done for building self-generating food systems and for connecting agro-ecosystems and natural areas.**

Vocabulary:

Collaboration – сотрудничество;

constituency – избиратели округа;  
to align – выстраивать, выравнивать, присоединяться;  
to encourage – призывать, воодушевлять;  
stakeholders – акционеры; negotiations – переговоры;  
to devise – разрабатывать, придумывать;  
allocation – распределение, размещение;  
to hinder – препятствовать, мешать;  
feasible – возможны, осуществимы, выполнимы;  
expansion – распространение, расширение;  
option – выбор, право выбора

Collaboration between environmental and agricultural constituencies is emerging. Non-productive farm-habitat enhancement is costly to many farmers. A new area for investment of conservation funds? Availability and access to land is a major constraint. Align agricultural and environmental policies and consider measures that encourage farmers for providing public goods (ecosystem services). The ecosystem approach and agro-environmental measures are increasingly part of policy agenda. Establish a conducive political process based on negotiation of different needs among stakeholders. Policies are devised by line ministries and integrated planning is hindered by sectoral resource allocations.

The challenge for conservationists and agriculturalists is to identify collaborative routes which are economically and socio-politically feasible. The expansion of organic agriculture and its integration into landscape planning represents a cost-efficient policy option for building self-generating food systems and for connecting agro-ecosystems and natural areas.

### VII. Choose the right answer.

1. Collaboration between environmental and agricultural constituencies is \_\_\_\_\_:  
a) emerging;  
b) disappearing.
2. Non-productive farm-habitat enhancement is \_\_\_\_\_ to many farmers:  
a) costly;  
b) cheap.
3. Availability and access to land is a major \_\_\_\_\_:  
a) improving factor;  
b) constraint.

4. Align agricultural and environmental policies and consider measures that \_\_\_\_\_ farmers for providing public goods:

- a) encourage;
- b) constrain.

5. The challenge for conservationists and agriculturalists is to identify collaborative routes which are \_\_\_\_\_:

- a) economically insufficient;
- b) economically and socio-politically feasible.

6. The expansion of organic agriculture and its integration into landscape planning represents a cost-efficient policy option for \_\_\_\_\_:

- a) building self – generating food systems;
- b) disconnecting agro-ecosystems and natural areas.

### VIII. Next to the sentences below write a word or a phrase from the text which you can use instead of the word or words in italics.

1. Collaboration between environmental and agricultural constituencies is *appearing*.

2. Non-productive farm-habitat *improvement* is costly to many farmers.

3. Availability and access to land is a major *obstacle*.

4. Align agricultural and environmental policies and consider measures that encourage farmers for public goods *security*.

5. Policies are devised by line ministries and integrated planning is *constrained* by sectoral resource allocations.

6. The challenge for conservationists and agriculturalists is to identify collaborative routes which *may be* economically and socio-politically *implemented*.

7. The expansion of organic agriculture and its integration into landscape planning represents a cost-efficient policy *choice* for building self-generating food systems and for connecting agro-ecosystems and natural areas.

### IX. Give the Russian equivalents to the following words and phrases.

Environmental and agricultural constituencies; farm-habitat enhancement; conservation funds; availability and access to land; agricultural and environmental policies; providing public goods; agro-environmental measures; policy agenda; conducive political process; sectoral resource allocations; collaborative routes; cost-efficient policy.

### X. Answer the following questions.

1. Collaboration between environmental and agricultural constituencies is emerging, isn't it?
2. Is non-productive farm-habitat enhancement costly to many farmers?
3. What is a major constraint?
4. What can encourage farmers for providing public goods?
5. What are increasingly part of policy agenda?
6. A conducive political process based on negotiation of different needs among stakeholders is to be established, isn't it?
8. What is the challenge for conservationists and agriculturalists?
9. What does the expansion of organic agriculture and its integration into landscape planning represent?

### XI. Discuss in small groups what measures should be done for encouraging farmers for providing public goods and for connecting agro-ecosystems and natural areas.

#### Unit 6

#### I. Read the following text and tell what organically farmed soils are.

##### Learn new words:

- environment – окружающая среда;  
to promote – содействовать, способствовать, продвигать;  
to compare – сравнивать;  
to decrease – уменьшать;  
leaching – выщелачивание;  
infestation – инвазия; to resist – сопротивляться, противостоять;  
to release – освободить, выпускать, облегчать;  
to retain – удерживать, поддерживать, сохранять;  
to contaminate – отравлять;  
to pollute – загрязнять; to distinguish – различать, отличать;  
to predict – предсказывать, определять.

Organic farms protect the environment by building soil organic matter and promoting natural systems rather than relying on synthetic fertilizers and pesticides. Compared to soils on conventional farm, organically farmed soils have:

- 1) Less nitrogen leaching
- 2) Better nutrient holding ability
- 3) More efficient biological nutrient cycling
- 4) Less agricultural runoff and erosion.

Good soil nutrient management planning is crucial for any farming operation to optimize plant growth and decrease risks of nutrient leaching and agricultural runoff.

*Many crops are genetically engineered with the Bt toxin in order to resist infestation from insects. Yet root exudates from these plants release the toxin into the soil, where it retains its activity for at least 234 days, long after its release. This stimulates major changes in soil biota that could affect nutrient cycling processes and reduce soil fertility. **Organic farming helps protect water quality.** Pesticides and other agricultural chemicals widely used in conventional farming contaminate ground water and rivers and pollute primary sources of drinking water. **Soil classification** is the branch of soil science which deals with the systematic categorization of soils based on distinguishing characteristics developed during soil formation as well as criteria that dictate choices in land use and soil management.*

*Civil engineers classify «soils», or more properly earthy materials, as foundations or building material. These technical systems are designed to predict the engineering properties and behavior of a soil based on a few simple laboratory or field tests. The most common is the Unified Soil Classification, with three major groups: (1) coarse grain, (2) fine grain, and (3) highly organic. The first two groups are then subdivided as follows: 1. Coarse grain: gravels, sands; 2. Fine grain: silts, clays, organics silts & clays. These are then subdivided according to their plasticity (for fine soils and coarse soils with some fines) and homogeneity (for coarse soils).*

#### II. Study the following expressions, paying attention on degrees of comparison:

- Less nitrogen leaching.....  
Better nutrient holding ability.....  
More efficient biological nutrient cycling....  
Small – smaller – the smallest  
Big – bigger – the biggest  
Old – older – the oldest  
Systematic– more systematic – the most systematic  
Efficient – more efficient – the most efficient  
Good – better – the best  
Bad – worse – the worst  
Little – less – the least  
Much – more – the most

**III. Change degrees of comparison of the following adjectives and adverbs:**

- Natural –
- Synthetic –
- Few –
- Conventional –
- Crucial –
- Widely –
- Genetically –
- Simple –
- Biological –
- Fine –
- Systematic –

**IV. Match verbs with nouns:**

|                |                          |
|----------------|--------------------------|
| to release     | primary sources of water |
| To resist      | natural systems          |
| To distinguish | toxin into soil          |
| To predict     | soil fertility           |
| To reduce      | Activity                 |
| To pollute     | Characteristics          |
| To retain      | behavior of soil         |
| To promote     | infestation from insects |

**V. Read the text once more and find the information which was mentioned in the text and prove it.**

1. Organic farms protect the environment by building soil organic matter and promoting natural systems.
2. Good soil nutrient management planning is crucial for any farming operation.
3. Many crops are genetically engineered with the Bt toxin.
4. Pesticides and other agricultural chemicals widely used in conventional farming contaminate ground water and rivers.
5. Soil classification is the branch of soil science which deals with the systematic categorization of soils.
6. Civil engineers classify «soils», or more properly earthy materials.
7. The most common is the Unified Soil Classification, with three major groups.

**VI. Answer the following questions:**

1. How do organic farms protect environment?
2. What do organically farmed soils have?

3. Why is good soil nutrient management so crucial?
4. What reduces soil fertility?
5. What is primary source of drinking water polluted by?
6. What is soil classification based on?
7. How many groups is soil classified into?
8. According what characteristics are they subdivided into?

**VII. Split into small groups and discuss what organically farmed soils are.**

**VIII. Read the text and tell how organic matter can be maintained.**

**Learn the new words:**

- to release – освободить, выпускать;
- a tilth – качество обработки почвы;
- an aggregate – агрегат, структурная отдельность;
- a pore space – отверстие, скважина;
- moisture-holding ability – влагоудерживающая способность;
- ponding – заполнение водой;
- runoff – течь, сток воды;
- equal – равный, равноценный;
- aerate – аэрация;
- plow down – запахивание.

**Maintain organic matter**

Soil organic matter is very important for good crop production and for reducing soil erosion. Organic matter is made up of dead plant material. During decomposition, this material releases nutrients for plants. Organic matter also improves soil structure and tilth. Organic matter and micro-organisms cement individual soil particles into larger aggregates. Soils high in organic matter have large, stable aggregates which resist erosion. A soil with stable aggregates also has larger pore spaces to hold water. With this increased moisture-holding ability, there is less ponding in fields, and less runoff and erosion. To maintain soil quality and fertility, new additions of plant material must equal the rate of organic matter decomposition and nutrient use by plants. Conventional tillage and fallowing practices increase soil temperature and also mix and aerate the soil, causing faster organic matter decomposition. The result has been a long-term decline in soil organic matter on the prairies. Returning crop residue to the soil helps to replace organic matter and plant nutrients. Rotations which include forages return



more residues to the soil and increase fertility. Manure applications and legume plow down are also good sources of organic matter and nutrients.

**IX. Read the text and choose the sentences which are true to it. Correct the false ones.**

1. Soil organic matter is very important for good crop production and for reducing soil erosion.
2. Organic matter is made up of plants growing.
3. During decomposition, this material releases nutrients for plants.
4. Organic matter also worsens soil structure and tilth.
5. Soils high in organic matter have small aggregates which resist erosion.
6. A soil with stable aggregates also has larger pore spaces to hold water.
7. Conventional tillage and fallowing practices decrease soil temperature.
8. Returning crop residue to the soil helps to replace organic matter and plant nutrients.
9. Rotations which include forages return less residues to the soil and increase fertility.
10. Manure applications and legume plow down are also good sources of organic matter and nutrients.

**X. Complete the following statements.**

1. Soil organic matter is very important for ... .
2. Organic matter is made up ... .
3. During decomposition, this material releases ... .
4. Organic matter also improves ... .
5. Organic matter and micro – organisms cement individual soil particles into ... .
6. A soil with stable aggregates also has larger pore spaces to ... .
7. With this increased moisture-holding ability, there is ... .
8. To maintain soil quality and fertility, new additions of plant material must equal ... .
9. Conventional tillage and fallowing practices increase ... .
10. The result has been a long – term decline in ... .
11. Returning crop residue to the soil helps to ... .
12. Rotations which include forages return ... .
13. Manure applications and legume plow down are also ... .

**XI. Fill in the table:**

|                      | Composition of soil | Functions | Practices | Results |
|----------------------|---------------------|-----------|-----------|---------|
| Organic matter soils |                     |           |           |         |
| Poor organic soils   |                     |           |           |         |

**XII. Discuss in small groups how and why organic matter is maintained.**

**Unit 7**

**I. Read the information about crop management decisions in Idaho and compare with that in Russia.**

**The following words are helpful:**

- precision – точность, четкость, аккуратность;
- option – выбор;
- beneficial – выгодный;
- profitable – доходный;
- flexible – гибкий;
- to provide – обеспечивать;
- to evaluate – оценивать;
- trials – пробы, испытания;
- an impact – воздействие, влияние;
- ample – обильный, достаточный, обширный;
- response – ответная реакция;
- to compare – сравнивать;
- to establish – устанавливать.

**Remember the names of crops:**

- condiment mustard* – горчица для приправы;
- pea* – горох;

*lentil* – чечевица;  
*spring barley* – яровой ячмень;  
*wheat* – пшеница; *alfalfa* – люцерна;  
*perennials* – многолетние растения;  
*cauliflower* – цветная капуста;  
*lettuce* – салат; *chicory* – цикорий;  
*spinach* – шпинат;  
*kale* – кормовая капуста;  
*squash* – тыква;  
*cucumber* – огурец;  
*melon* – дыня;  
*pumpkin* – тыква;  
*pepper* – перец;  
*eggplant* – баклажан;  
*shallot* – лук;  
*garlic* – чеснок;  
*leek* – лук-порей;  
*carrot* – морковь;  
*beet* – редька;  
*turnip* – репа;  
*radish* – редис;  
*dill* – укроп;  
*parsnip* – пастернак;  
*parsley* – петрушка.

### Crop Management Decisions Move Toward Precision, Sustainable Agriculture

University of Idaho researchers are working with growers to find ways to have more crop rotation options, better management for rotations and increased crop residue during critical erosion times. Increasing crop residue is instrumental in reducing erosion, but can increase disease, weed and insect problems. Increased crop rotation can reduce these pest problems. Rotation crops need to be profitable, beneficial, flexible, provide adequate crop residue and their effects need to be best managed in the crop that follows. Extension workers and researchers have conducted eight field trials evaluating rotation crops, the impact of these crops on a following wheat crop, crop residue production by rotation crops and N fertility responses in the following wheat crop. Canola, winter rapeseed, condiment mustard, pea, lentil, spring barley and wheat are all potential rotation crops before

wheat. Wheat almost always yielded most following pea or lentil and compared to pea, wheat yield after wheat was 76 percent as much, 84 percent as much following barley, and 91% as much following Brassica crops. When N fertility was increased, these differences were less compared to pea. At low fertility, wheat following Brassica crops appears to need less N fertilizer. Pea and lentil are excellent rotation crops for winter wheat, but provide very limited crop residue for the critical erosion period following winter wheat seeding and establishment. Average annual soil losses of 9 to 35 tons per acre can occur in winter wheat after pea or lentil. Increasing the ground cover by using higher residue rotation crops, such as the Brassica crops, should reduce this soil loss by more than half. Mustard as an alternative rotation crop should allow low crop inputs of fertilizer and pesticides and provide ample residue for erosion control. Efforts to develop a practical and profitable way to crop mustard in the area are ongoing. There is a potential of growing 100,000 acres of mustard in the region, and when Canola and industrial quality mustard is available, at least 300,000 acres could be grown.

### II. Fill in the table

|  | The USA, Idaho | Russia |
|--|----------------|--------|
| Problems reduced by crop rotation                    |                |        |
| Rotation crop need to be                             |                |        |
| Researchers conduct field trials to evaluate         |                |        |
| Potential rotation crops before                      |                |        |
| Wheat are  |                |        |
| Wheat yields while rotating are                      |                |        |
| Average annual soil losses are                       |                |        |
| Soil loss can be reduced by                          |                |        |
| Ample residue for erosion control can be provided by |                |        |

### III. Compare crop management decisions in Idaho and Russia in small groups. Use the following cliches:

-To my mind, - I think, -I suppose, - as for me, - on the contrary, - the other way round, -the things are not the same, - it's quite the same...

**IV. Make different questions on the text.**

**V. Answer the following questions.**

**VI. Speak on environmental benefits of organic agriculture, including soil, water, air in small groups.**

**VII. Read the information about ecological services how to solve ecological problems and name the most effective ways.**

**Learn new words:**

to favor – благоприятствовать, помогать, поддерживать;

interaction – взаимодействие;

vital – жизненно важный;

derive – извлечение, получение, наличие;

pollination – опыление;

habitat – естественная среда, среда обитания;

hidden cost – скрытый вклад;

perish – погибать, приходить в негодность;

depletion – уменьшение, истощение;

application – применение, использование;

disposal – реализация, устранение, расположение, передача, продажа.

**Ecological problems and services.** The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem that are vital for both agricultural production and nature conservation. Ecological services derived include soil forming and conditioning, soil stabilization, waste recycling, carbon sequestration, nutrients cycling, pollination and habitats. By opting for organic products, the consumer through his/her purchasing power promotes a less polluting agricultural system. Benefits of organic agriculture to the environment in terms of natural resource are increased.

Man should carefully study the impact of his activity on the surrounding nature. The ecological problem is not simply the environmental pollution problem, but the problem of turning man's uncontrolled impact on nature into a purposeful and planned interaction with the latter. Some scientists say that human civilization will perish as a result of environmental pollution and depletion of non-renewable natural resources.

The rational utilization of resources and the conservation of nature are

matter of state policy in many countries. All problems concerning the interaction of man and nature are now of international importance.

The ecological problem is one of the pressing problems of our days. It is closely linked to the problem of economic growth, progress in science and technology, natural resources, energy and food supply. An increasing influence on nature and the application of new technological processes may cause catastrophic result.

The most promising way to solve the problem of ecology is to improve technology, because the cleansing systems are complex and costly. In conclusion, it may be summarized that the environmental protection is a solution of waste disposal problems and educational activity among people.

**IX. Say if these sentences are true (T) or false (F). Correct the false ones.**

1. The impact of organic agriculture on natural resources favors interactions within the agro-ecosystem that are vital for both agricultural production and nature conservation.

2. By opting for organic products, the consumer through his/her purchasing power promotes a more polluting agricultural system.

3. Man should carefully study the impact of his activity on the surrounding nature.

4. Some scientists say that human civilization will develop as a result of environmental pollution and depletion of non-renewable natural resources.

5. All problems concerning the interaction of man and nature are not of international importance.

**X. Complete the following statements:**

1. Ecological services derived include ... .

2. Benefits of organic agriculture to the environment in terms of natural resource ... .

3. The ecological problem is not simply to the environmental pollution problem, but ... .

4. The rational utilization of resources and the conservation of nature are matter of ... .

5. The ecological problem is one of ... .

6. It is closely linked to ... .

7. An increasing influence on nature and the application of new technological processes may cause ... .

8. The most promising way to solve the problem of ecology is to ... .
9. The environmental protection is ... .

**XI. Answer the following questions:**

1. What does the impact of organic agriculture on natural resources favor?
2. What do ecological services derived include?
3. How do consumers promote a less polluting impact on agricultural system?
4. The ecological problem is simply the environmental pollution problem, isn't it?
5. Will human civilization perish as a result of environmental pollution only?
6. The rational utilization of resources and the conservation of nature are matter of an individual, isn't it?
7. All problems concerning the interaction of man and nature are now of domestic problem of any country or international importance?
8. What is ecological problem closely linked to?
9. What may cause catastrophic result?
10. What is the most promising way to solve the problem of ecology?

**XII. Compare ecological problems of Russia and other countries and say if they are similar or different and discuss them in small groups.**

**XIII. Split into pairs and discuss how the ecological problems should be solved internationally.**

**Unit 8**

**Organic crop production system**

**I. Read the text and say what is essential to successful organic crop production system.**

**Learn new words:**

essential – необходимый, существенный;  
 to maintain – поддерживать, удерживать, сохранять;  
 sustainability – поддержка, подкрепление, стойкость, выносливость;  
 requirement – требование, необходимость;  
 caution – осторожность, предусмотрительность, предостережение;  
 to supplement – пополнять, добавлять;  
 tillage – обработка почвы, возделанная земля.

**Fertile soil** is essential to successful organic crop productions systems. Synthetic fertilizer use is not allowed, therefore organic farmers must use various other means to replace nutrients and improve soil fertility. Organic soil management techniques build organic matter and humus, protect the soil from erosion, reduce nutrient loss, and maintain soil in a condition that supports diverse life-forms. Crop rotations are an essential component in fertility management, pest control and long-term sustainability. Soil testing is an important practice in managing an organic farm and is also a requirement of many organizations providing organic certification. Proper soil sampling and testing should be done every two or three years to provide the producer with a record of soil nutrient status. A soil test will include information on texture, pH, organic matter content, cation exchange capacity, salinity and electrical conductivity. **Nutrient Requirements.** There are 17 essential nutrients required for plant growth. The essential macronutrients are nitrogen (N), phosphorus (P), potassium (K) and sulphur (S). Calcium (Ca) and magnesium (Mg) are considered secondary nutrients. Micronutrients include iron (Fe), manganese (Mn), boron (B), molybdenum (Mo), copper (Cu), zinc (Zn), nickel (Ni) and chlorine (Cl). The remaining nutrients, carbon, hydrogen (H), and oxygen (O) compose more than 90% of the dry matter weight of the plant and are supplied from air and water. The soil often provides the majority of the nutrients, however, the remainder must be supplemented. **Nutrient Loss.** Conserving nutrients is an important part of any farm operation. Nutrient loss may harm the environment, in addition to the loss of money, time and resources. For example, nutrients leaching into ground or surface water may cause excessive algae growth and oxygen depletion, harming natural flora and fauna. Nutrient run-off increases when certain factors exist: fine-textured (clay) soils with low infiltration rates, high rainfall and excessive tillage and crop residue incorporation. Nutrient loss can be reduced with effective use of catch crops, crop rotations and good manure management techniques.

**II. Find the Russian equivalents of the following words and phrases:**

Fertile soil, nutrients, organic matter, nutrient loss, diverse life-forms, crop rotation, soil sampling, soil nutrient status, cation exchange capacity, salinity, electrical conductivity, nitrogen (N), phosphorus (P), potassium (K) and sulphur (S), calcium (Ca), magnesium (Mg), iron (Fe), manganese (Mn), boron (B), molybdenum (Mo), copper (Cu), zinc (Zn), nickel (Ni), chlorine

(Cl), carbon, hydrogen (H), and oxygen (O), conserving nutrients, to harm the environment, nutrients leaching, excessive algae growth, oxygen depletion, nutrient run-off, fine-textured (clay) soils, crop residue incorporation, catch crops, manure management techniques.

**III. Say if these sentences true or false. Correct the false sentences.**

1. Organic soil management help maintain soil in a good condition.
2. Organic soil management techniques build organic matter and humus, protect the soil from erosion, reduce nutrient loss.
3. Crop rotation are not essential component for soil fertility.
4. Proper soil sampling and testing should be done every year to provide the producer with a record of soil nutrient status.
5. Soil testing includes only information on texture.
6. There are a few essential nutrients required for plant growth.
7. Conserving nutrients is an important part of any farm operation.
8. Nutrient loss may harm the environment and can't be reduced.

**IV. Complete the following statements:**

1. Organic soil management technique build ... .
2. Crop rotations are an essential component in ... .
3. Soil testing is an important practice in....
4. Proper soil sampling and testing should be done ... .
5. A soil test will include information on ... .
6. There are 17 essential macronutrients required for plant growth ...
7. The soil often provides the majority of....
8. Conserving nutrients is an important part of ... .
9. Nutrient loss may harm ... .
10. Nutrient loss can be reduced with ... .

**V. Answer the questions:**

1. What kind of soil is essential to successful organic crop productions systems?
2. Synthetic fertilizer use is not allowed, is it?
3. What are organic soil management techniques used for?
4. Crop rotations are an essential component in fertility management, pest control and long-term sustainability, aren't they?
5. Is soil testing an important practice in managing an organic farm or not?
6. What will a soil test include?
7. What are 17 essential nutrients required for plant growth?
8. Is conserving nutrients an important part of any farm operation or not?

9. What may nutrient loss harm?
10. How can nutrient loss be reduced?

**VI. Split into pairs and discuss what is essential to successful organic crop production system.**

**VII. Read the following text.**

**Learn the new words:**

tillage – обработка почвы, возделанная земля;  
decomposition – распад, разложение;  
amendment – поправка, исправление;  
to retard – задерживать, замедлять, отставать;  
compaction – плотность, компактность;  
to smother – подавлять, устранять;  
to inhibit – препятствовать, сдерживать, подавлять;  
to inoculate – сделать прививку;  
subsequent – последующий;  
perennial – многолетний, длящийся круглый год.

**Soil Fertility.** Nutrients to meet both the needs of the crop and organic certification standards may be supplied by several management tools: Animal Manure. Manure from any source must be composted for a specific period before application on organic fields (check with your certification body for specific requirements):

- The compost must not be allowed to pollute water sources and the pile must be turned regularly to allow effective decomposition.
- The levels of the various nutrients in the manure vary according to the type of animals, the nature of the feed and how the manure was stored. Manure generally contains all macro-and micronutrients, but rarely in the proportion needed by crops. Manure or compost analysis is essential to identify which nutrients may need supplementation from another source.
- Its physical and biological characteristics make manure an excellent amendment for low organic matter, eroded, saline and other poorly-structured soils.

**Green Manure.** A green manure is a crop grown primarily for the purpose of being plowed down to add nutrients and organic matter to the soil. Organic farmers consider green manure to be an essential part of the farm ecosystem. Green manure plays a role in soil improvement, nutrient management and pest management. It is effective in controlling erosion,

adding organic matter, improving soil structure, stimulating biological activity in the soil and reducing compaction. Legumes such as alfalfa and sweet clover can fix over 200 lb. per acre of nitrogen. Effective green manure smothers weeds, breaks insect and disease cycles and provides a habitat for bees, parasitic wasps, and other beneficial organisms. Fall rye and oats are particularly competitive. Some crops such as yellow sweet clover and mustard are allelopathic and produce natural chemical toxins that retard germination and inhibit the early growth of weed species. The value of green manure can vary with the type of crop and the timing of the plow-down process.

**Legumes in the rotation.** When properly inoculated before planting, annual legumes such as peas and lentils will fix 50-90% of the N they require from the air. Legume residue breaks down more quickly than non-legume residue, which allows N to be available sooner to subsequent crops when the residue is worked into the soil. Perennial legumes such as alfalfa supply substantial amounts of N to the soil from their root systems, even though much of the top growth may be removed as hay or grazed pasture.

**Rotating high and low nutrient demand crops.** Different crops require different amounts of the various essential nutrients. Rotating high and low nutrient demand crops may avoid depleting one or more of those essential nutrients in the soil. Knowing the nutrient demands of various crops is essential to the producer and many resources are available to provide this information.

**Crop Residues.** Returning crop residues to the soil contributes tremendously to the organic matter and the nutrient pool available for new plant growth. Crop residues also prevent soil erosion and improve the water-holding and infiltration properties of soils.

**Conclusion.** The health of the soil is essential for a successful organic cropping system. Any management practice that increases biological activity in the soil will enhance the productivity of the soil environment. All living things depend on a healthy soil – plants, animals and humans alike. Proper attention to fertility in an organic production system will be the key to the farm's sustainability.

#### **VIII. Find the Russian equivalents to the following words and phrases:**

Legumes, alfalfa, sweet clover, weed, bee, parasitic wasp, beneficial organisms, rye, oats, yellow sweet clover, mustard, allelopathic, chemical

toxin, germination, weed species, pea, lentil, hay, grazed pasture, nutrient pool, properties of soil, fertility, farm's sustainability.

#### **IX. Find true sentences according to the text.**

1. Nutrients to meet both the needs of the crop and organic certification standards.
2. Manure from any source must not be composted for a specific period before application.
3. Animal manure contains all macro and micronutrients needed for crops.
4. Green manure is being plowed down to reduce nutrients in soil.
5. Green manure plays a role in soil improvement, nutrient management and pest management.
6. Effective green manure smothers weeds, breaks insect and disease cycles and provides a habitat for bees, parasitic wasps, and other beneficial organisms.
7. Legumes will fix 50-90% of N if they are not inoculated.
8. Crops demand similar amount of essential N.
9. Crop residues prevent soil erosion.
10. The health of the soil is essential for a successful organic cropping system.

#### **X. Complete the sentences.**

- \* Nutrients to meet both the needs of the crops and organic certification standards may.....
- \* Animal manure must be composted for....
- \* Its physical and biological characteristics make manure....
- \* Green manure is a crop grown for...
- \* Green manure is effective in...
- \* Perennial legumes supply substantial nutrients to....
- \* Rotating high and low nutrient demand crops may avoid ...
- \* Crop residues contribute ...
- \* All living things depend on ...

#### **XI. Prove that:**

1. Soil testing is an important practice in managing an organic farm.
2. There are 17 essential nutrients required for plant growth.
3. Loss of nutrients may harm the environment.
4. Animal manure contains all macro and micronutrients but not in the proportion needed for crops.

5. Green manure plays a role in soil improvement, nutrient management and pest management.
6. Legumes may fix 50–90% N.
7. Different crops demand different amount of various essential N.
8. Returning plant residues to the soil contributes to the organic matter and N. pool.
9. Health of soil is essential for successful organic cropping system.

**XII. Imagine that you are making a report on international conference on organic farming. Speak on different organic soil management techniques used in Russia, including Buryatia:**

1. Soil testing.
2. Nutrient requirements and N. run-off.
3. Animal manure management tool.
4. Green manure management tool.
5. Legumes in the rotation.
6. Rotating high and low N. demand crop.
7. Crop residues.
8. What is a key to farm's sustainability in Russia.



**Unit 9**

**What is the Eco Certification Program?**

**I. Read the text and say what Eco certification program is.**

Learn new vocabulary:

genuine – подлинный, истинный, настоящий;  
community – сообщество, населенный пункт, микрорайон;

an assurance – гарантия, страхование, уверенность;  
a commitment – обязательство;  
is defined – определяется;  
a primary focus – первоначальная цель;  
to foster – поощрять;  
appreciation – оценка, определение;  
attraction – достопримечательность;  
accommodation – жилье.

The Eco Certification Program is a world first Program. It has been developed by industry for industry, addressing the need to identify genuine ecotourism and nature tourism operators in Australia. The Eco Certification Program is now being exported to the rest of the world as the International Ecotourism Standard. Ecotourism and nature tourism certification provide industry, protected area managers, local communities and travelers with an assurance that a certified product is backed by a commitment to best practice ecological sustainability, natural area management and the provision of quality ecotourism experiences.

**What are Nature Tourism and Ecotourism?**

Under the Eco Certification Program, **Nature Tourism** is defined as:

Ecologically sustainable tourism with a primary focus on experiencing natural areas.

Under the Eco Certification Program, **Ecotourism** is defined as:

Ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation.

**What can be certified under the Eco Certification Program?**

The Eco Certification Program accredits products not companies. Three types of nature tourism or ecotourism product may be accredited:

**Tours Attractions Accommodation** Many operators manage more than one type of product.

**II. Match the columns:**

|                       |                       |
|-----------------------|-----------------------|
| it has been developed | подкрепляется         |
| is being exported     | можно сертифицировать |
| is defined            | можно аккредитовать   |
| may be accredited     | экспортируется        |
| is backed             | определяется          |
| can be certified      | развивался            |

### III. Complete the following statements:

1. The Eco Certification Program has been developed by industry for industry, addressing the need \_\_\_\_\_ in Australia.
2. The Eco Certification Program is now being exported to the rest of the world as the \_\_\_\_\_.
3. Ecotourism and nature tourism certification provide \_\_\_\_\_ commitment to best practice ecological sustainability, natural area management and the provision of quality ecotourism experiences.
4. Nature Tourism is defined as \_\_\_\_\_.
5. Ecotourism is defined as \_\_\_\_\_.
6. Three types of nature tourism or ecotourism product may be accredited \_\_\_\_\_.

### IV. Say if these sentences are true (T) or false (F). Correct the false ones.

1. The Eco Certification Program is a world first Program.
2. It addresses the need to identify genuine ecotourism and nature tourism operators in Russia.
3. The Eco Certification Program is now being exported to the rest of the world as the International Ecotourism Standard.
4. Ecotourism and nature tourism certification provide industry, protected area managers, local communities and travelers with an assurance that a certified product is backed by a commitment to bad practice ecological sustainability, natural area management and the provision of ecotourism experiences.
5. Nature Tourism is defined as: ecologically unsustainable tourism with a focus on experiencing natural areas.
6. Ecotourism is defined as: ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation.
7. The Eco Certification Program accredits companies not products.
8. One type of nature tourism or ecotourism product may be accredited.

### V. Name the reason why Eco Certification Program has become an International Ecotourism Standard.

### VI. Tell the differences between Nature Tourism and Ecotourism.

### VII. Enumerate types of nature tourism or ecotourism product which may be accredited.

### VIII. Try to prove that Eco Certification Program is a necessary requirement for ecotourism and nature tourism.

### IX. Read the following text and tell about principles of eligibility of accreditation.

#### The list of new words is helpful:

- Eligibility – право на что-то, приемлемость;  
 business ethics – деловая этика;  
 responsible marketing – ответственный маркетинг;  
 customer satisfaction – удовлетворение нужд потребителей;  
 natural area focus – сосредоточить внимание на естественную среду;  
 interpretation – толкование, объяснение;  
 cultural respect and sensitivity – уважительное и чуткое отношение к культуре;  
 assessment criteria – критерий оценки; to incorporate – объединять, включать;  
 stringent set – строгий, точный, обязательный набор;  
 to encourage – поощрять, поддерживать; to reward – вознаграждать;  
 to exceed – превышать.

#### Eligibility for accreditation is based upon the following principles:

| Triple bottom line           | The nature tourism or ecotourism product principles: | Nature Tourism | Ecotourism/Advanced Ecotourism |
|------------------------------|--|----------------|--------------------------------|
| Economic Sustainability      | 1. Business Management and Operational Planning      | ✓              | ✓                              |
|                              | 2. Business Ethics                                   | ✓              | ✓                              |
|                              | 3. Responsible Marketing                             | ✓              | ✓                              |
|                              | 4. Customer Satisfaction                             | ✓              | ✓                              |
| Environmental Sustainability | 5. Natural Area Focus                                | ✓              | ✓                              |
|                              | 6. Environmental Sustainability                      | ✓              | ✓                              |
|                              | 7. Interpretation and Education                      | N/A            | ✓                              |
|                              | 8. Contribution to Conservation                      | N/A            | ✓                              |
| Social Sustainability        | 9. Working with Local Communities                    | N/A            | ✓                              |
|                              | 10. Cultural Respect and Sensitivity                 | N/A            | ✓                              |



Each of the above principles is reflected in specific assessment criteria that establish two categories of certification: Nature Tourism and Ecotourism. Ecotourism certification has two levels Ecotourism and Advanced Ecotourism. Each level of certification incorporates a more stringent set of assessment criteria. The criteria for Advanced Ecotourism also encourage and reward innovative best practice that exceeds the Eco Certification Program standards.

**X. Speak on principles of eligibility of accreditation in pairs and discuss what it reflects.**

**XI. Read the information on the benefits of Certification.**

Learn the new vocabulary:

a guide to assist – руководство для оказания помощи;

to implement – выполнять, осуществлять;

to improve performance – улучшать выполнение;

a tool – инструмент;

impact – влияние;

essential – важный, необходимый.

**What are the benefits of Certification?**

Nature tourism and ecotourism certification provides benefits to operators, managers, communities and travelers:

- criteria to assist operators plan and develop their nature tourism and/or ecotourism product;
- a guide to assist operators implement the principles of ecologically sustainable development;
- an opportunity for operators to continually improve performance to a standard recognized as best practice;
- a recognized logo for operators to use in their marketing material;
- a recognized means for protected area managers and travelers to identify genuine nature tourism and ecotourism operators;
- a tool for protected area managers to encourage improved practices that lead to less environmental impact;
- a tool to help local communities determine a mix of tourism activities that maximizes benefits and minimizes negative impacts;
- an essential educational and information tool;
- The Eco Certification Program includes Membership of Ecotourism at the applicable level based of gross turnover.

**XII. Complete the sentences using the text.**

1. Nature tourism and ecotourism certification provides benefits ... .
2. These are criteria to assist operators plan and develop ... .
3. It is a guide to assist operators implement ... .
4. It is a recognized logo for operators to ... .
5. It is a recognized means for protected area managers and travelers to ... .
6. It is a tool for protected area managers to ... .
7. It is a tool to help local communities determine ... .

**XIII. Find the synonyms to the following words and definitions.**

- a benefit
- to assist
- to implement
- an opportunity
- to improve
- continually
- performance
- to use
- marketing material
- means
- impact
- to determine
- essential

**XIV. Make the list of Certification benefits and discuss it:**

1. What kind of criteria is it?
2. What principles does it assist to implement?
3. What opportunity does it give for operators?
4. Is it a recognized logo?
5. It is a recognized means for protected area managers and travelers, isn't it?
6. What tool is it for protected area managers?
7. How does it help local communities?
8. What does the Eco Certification Program include?

**Unit 10**

**I. Read the new information and answer how to apply for certification**

Study the list of new words:

A request form – анкетная форма заявки в виде вопросов;

to define – определить;

to seek – искать, просить, обращаться;

an inclusion – включение, присоединение;

to clarify – выяснить;

appropriate – соответствующий, подходящий; a kit – комплект.

To apply for certification, operators need to purchase a copy of the application document at a cost of \$85 mailed, by completing the request form in the Ecotourism brochure or at website. Up to four ecotourism or nature tourism products may be included in one document. On receiving the document, operators need at first to carefully define the products for which they are seeking certification. Matters to be addressed include the category (tour, accommodation or attraction), the activities undertaken and the inclusions. Then work through the self-assessment questions that apply to the products. At any time through this process operators are encouraged to contact the Eco Certification Program help desk to clarify any issues. Upon completion, return the document to Ecotourism office with the appropriate application and annual fees. If the application is successful, the operator is eligible to display one of the Eco Certification Program logos next to their accredited products. Operators also receive a kit including a certificate, logos in electronic form and decals to assist in promoting their product as a genuine ecotourism or nature tourism experience. Certification is valid for three years, after which a new application has to be made. Annual renewals are payable each December.

## **II. Read the text and choose the sentences which are true to it.**

### **Correct the false ones.**

1. To apply for certification, operators need to purchase a copy of the application document at a cost of \$8 mailed.
2. Operators need to complete the request form in the Ecotourism brochure or at our website.
3. Up to four ecotourism or nature tourism products may be included in two documents.
4. On receiving the document, operators need at first to carefully define the products for which they are seeking certification.
5. Matters to be addressed include the accommodation, the activities undertaken.

6. Operators are not allowed to contact the Eco Certification Program help desk to clarify any issues.

7. If the application is successful, the operator is eligible to display one of the Eco Certification Program logos next to their accredited products.

8. Certification is valid for one year, after which a new application has to be made. Annual renewals are payable each December.

## **III. These sentences are written in wrong order. Try to recollect their succession in the text.**

1. Work through the self-assessment questions that apply to the products.
2. Operators receive a kit including a certificate, logos in electronic form and decals to assist in promoting their product as a genuine ecotourism or nature tourism experience.
3. Operators need to carefully define the products for which they are seeking certification.
4. Up to four ecotourism or nature tourism products may be included in one document.
5. Certification is valid for three years, after which a new application has to be made.
6. Operators need to purchase a copy of the application document at a cost of \$85 mailed.
7. Annual renewals are payable each December.
8. Operators need to complete the request form in the Ecotourism brochure or at website.
9. Matters to be addressed include the category (tour, accommodation or attraction), the activities undertaken and the inclusions.
10. Upon completion, return the document to Ecotourism office with the appropriate application and annual fees.
11. At any time through this process operators are encouraged to contact the Eco Certification Program help desk to clarify any issues.

## **IV. Find the English equivalents to the following words and phrases.**

Подать заявку, купить копию анкетной формы, заполнить форму заявки, быть включенным в документ, определить продукцию, вопросы по самооценке, бюро по оказанию помощи, после завершения, ежегодная сумма оплаты (налог), иметь право, наклеивать (размещать) логотип, рекламировать продукцию, ежегодные обновления.

**V. Tell step by step how to apply for certification:**

- 1ster: \_\_\_\_\_
- 2ster: \_\_\_\_\_
- 3ster: \_\_\_\_\_
- 4ster: \_\_\_\_\_
- 5ster: \_\_\_\_\_
- 6ster: \_\_\_\_\_, etc.

**VI. Discuss with your partner how you can apply for Eco certification and what steps you need to make for it.**

**VII. Read the text and say how much it will cost to apply for certification.**

Learn new vocabulary:

- To obtain – получать;
- annual fees – ежегодный налог;
- turnover – товарооборот;
- management support – помощь по управлению;
- to oversee – предусматривать;
- an Audit and an Assessment Panel – комитет по аудиту и оценке;
- self-funding – самофинансирующий;
- profit program – программа по получению прибыли, дохода;
- mentoring program – программа наставничества;
- to forward – способствовать, ускорять;
- Assessor – эксперт-оценщик;
- to review – просматривать, пересматривать, рецензировать; to score – подсчитывать, вести счет;
- final decision – окончательное решение;
- complexity – сложность, трудность, запутанность;
- extent – степень;
- internally inconsistent – непоследовательны, противоречивы по внутреннему содержанию.

The cost of obtaining the application document (GST and mail inclusive) is \$85. Application and annual fees (GST inclusive) are calculated according to the business’s annual turnover:

| Turnover<br>\$         | Application fee<br>\$<br>once every 3<br>years | Annual fees<br>Pro-rata period |        |         |        |
|------------------------|--|--------------------------------|--------|---------|--------|
|                        |  | 1 year                         | s year | \$ year | j year |
| <100,000               | 200  | 220                            | 165    | 110     | 55     |
| 100,000 – 250,000      | 260  | 280                            | 210    | 140     | 70     |
| 250,000 – 1,000,000    | 330  | 460                            | 345    | 230     | 115    |
| 1,000,000 – 5,000,000  | 430  | 680                            | 510    | 340     | 170    |
| 5,000,000 – 10,000,000 | 530  | 840                            | 630    | 420     | 210    |
| >10,000,000            | 730  | 940                            | 705    | 475     | 235    |

The Eco Certification Program is an initiative of Ecotourism Australia, which has established an Eco Certification Program Management Committee to provide policy and management support for the program. The Management Committee oversees an Audit and an Assessment Panel, which are Chaired by a person independent of Ecotourism. The Eco Certification Program operates as a self-funding, not for profit program. The Ecotourism management team coordinates the day to day activities of the program and provides a help desk and mentoring program for operators completing an application.

**How are the Eco Certification Program products assessed?**

When an application is received it is forwarded to an independent trained Assessor who reviews and scores the application, and contacts referees and the operator for clarification. The Assessor’s report on the application is considered by the Assessment Panel at a monthly meeting before a final decision is made on the applicable level of Certification. The assessment process is normally completed within eight weeks depending on the complexity of the application and the extent of the background information provided. Applications which are incomplete, fail to clearly define the product for which accreditation is sought or are internally inconsistent will require further clarification by the Assessor and will take longer to process.

**VIII. Choose the right variant and complete the sentences.**

1. The cost of obtaining the application document (GST and mail inclusive) is:
  - a) \$ 65;
  - b) \$85;
  - c) \$58.

2. Application and annual fees (GST inclusive) are calculated according to:
  - a) the business's annual turnover;
  - b) the business's monthly turnover;
  - c) the business's monthly profit.
3. Eco Certification Program Management Committee has been established to provide:
  - a) mentoring program;
  - b) policy and management support for the program;
  - c) profit program.
4. The Eco Certification Program operates as:
  - a) self-funding;
  - b) not for profit program;
  - c) for profit program.
5. When an application is received it is forwarded to:
  - a) Ecotourism manager;
  - b) Ecotourism coordinator;
  - c) an independent trained Assessor.
6. The Assessor's report on the application is considered by the Assessment Panel at:
  - a) monthly meeting;
  - b) weekly meeting;
  - c) annual meeting.

**IX. Say if these sentences are true (T) or false (F). Correct the false ones.**

1. The cost of obtaining the application document is \$55.
2. Application and annual fees (GST inclusive) are calculated according to the business's annual turnover.
3. Eco Certification Program Management Committee provides policy and management support for tourists.
4. Audit and an Assessment Panel, which are Chaired by a person independent of Ecotourism.
5. The Eco Certification Program operates for profit program, not as a self-funding.
6. The Ecotourism management team coordinates the day to day activities of the program.
7. When an application is received it is forwarded to an independent Ecotourism manager.

8. The assessment process is normally completed within three weeks.
9. Applications which are incomplete, fail to clearly define the product for which accreditation is sought.

**X. Answer the following questions.**

1. The cost of obtaining the application document (GST and mail inclusive) is \$65, isn't it?
2. Are application and annual fees (GST inclusive) calculated according to the business's annual turnover or not?
3. Has an Eco Certification Program Management Committee been established to provide policy and management support for the program?
4. Does the Eco Certification Program operate as a self-funding or for profit program?
5. What does the Ecotourism management team coordinate and provide?
6. Whom is received application forwarded?
7. By whom and where is the Assessor's report on the application considered?
8. For what period is the assessment process normally completed?
9. Why may applications fail to clearly define the product for which accreditation is sought?

**XI. Split into pairs and discuss how much it'll cost you to apply for certification and how the Eco Certification Program products are assessed.**

**Unit 11**

**The threat of global ecological crises**

**I. Read the text and discuss the major reasons of ecological crises.**

Study the list of vocabulary and learn new words:

- on the border – на рубеже;  
 necessity – необходимость, нужда;  
 strategy of optional relationships – стратегия выбора отношений;  
 variability – изменчивость, непостоянство;  
 decline – спад, ухудшение, снижение;  
 extinction – вымирание;  
 irreversible transformation – необратимые преобразования;  
 inevitable condition – необходимое условие.

The threat of global ecological crises on the border of the 19–21

centuries determines the necessity of formation of the strategy of optional relationships between man and nature. The “Biological Diversity” in the Convention is defined as variability of living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and ecological complexes, which include them as parts; this definition includes also the diversity within species, between species and diversity of ecosystems.

The decline in variability occupies a particular place among principal ecological problems. Intensive destruction of natural ecosystems and extinction of living organisms take place. Natural ecosystems are completely over a fifth of the land. Thousands of species of plants and animals are threatened: more than 9 thousand species of animals and almost 7 thousand species of plants were included in Red List 2000.

Further decline of biodiversity may lead to destabilization of the biota, loss of wholeness of biosphere, and of its ability of maintenance of the main characteristics of the environment. As a result of the irreversible transformation of the biosphere, it may become unsuitable for human life. The maintenance of diversity of the living systems on the Earth is inevitable condition of survival of people and sustainable development of civilization. However, the world is in crises and the problems of mankind are not solved by their intellectual leaders. Actually, the scientists haven’t an intellectual boldness to answer truthfully – even to themselves – a question about the first-cause of the approaching ecological catastrophe, and as a matter of fact, also of all other disasters of mankind.

## II. Answer the following questions:

1. What does the threat of global ecological crises determine?
2. What is a biological diversity?
3. The decline in variability occupies a particular place among principal ecological problems, isn’t it?
4. May further decline of biodiversity lead to destabilization of the biota, loss of wholeness of biosphere or not?
5. What other problems may decline of biodiversity lead to?
6. What is the result of it?
7. The problems of mankind are solved by their intellectual leaders, aren’t they?
8. Have scientists an intellectual boldness to answer a question about the first-cause of the approaching ecological catastrophe and all other disasters of mankind?

**III. For centuries people haven’t been in the pursuit of their “proper role” on Earth, extending their power over nature, haven’t they? What do we know about the results of such activity? Argue the following statements. Make use of the conversational formulas that help to introduce your opinion:**

|                      |                         |                  |
|----------------------|-------------------------|------------------|
| I agree that ...     | I find it ...           | I doubt it ...   |
| Basically it is ...  | I admit that ...        | I’m not sure ... |
| It appears to me ... | It seems to me that ... | I see it is ...  |
| As far as I know ... | I believe ...           | I can’t say ...  |

We know that:

- A) All has been done for the good of a man ...
- B) Man’s activity means new demands, new horizons ...
- C) Industrial development caused damages to the environment ...
- D) Mans activity has made a little impact on nature ...
- E) The threat of ecological catastrophe approaches simultaneously from the different directions ... .

## IV. Have you ever seen:

- A dark smoke coming from a factory chimney?
- A volcano eruption?
- An exhaust cloud from vehicles?
- A truck kicking up dust on a dirty road?
- Storage piles of gravel, sand and rubbish?
- Someone smoking a cigarette?
- A lot of garbage in streets, outside of towns and cities, on the banks of rivers, lakes, etc.

If you have seen any of these things, you know what environment pollution looks like. Someone can ask why we should worry about pollution. **But for sure you know reasons of environment pollution threat, name them.**

So, you can see it may cause us real problems:

- a) indoor and outdoor pollution;
- b) acid rains;
- c) global climate change, etc.

**Continue the list of problems and discuss it in small groups.**

**V. Read the text and say if you can find the way out to save our Planet from ecological catastrophe.**

The world is in crises and the problems of mankind are not solved by their intellectual leaders. The philosophers and publicists only vaguely blame “the dark sides of progress”, the scientists name the ecological crises as “technogeneous”, but the most “scientific” and serious is considered to list “reasons” of ecological crises. Really, such “objectivity” and “scientific completeness of research” serve to belittling of the real cause of crises – of necessity to feed and support the excessively increased population. Ecology is not “a science about pollution” as many people consider it. The pollution of environment with specifically those or other substances is just a sanitary, technical problem. The thought rises to a level of the ecology when it is realized that any sanitary and technical measures, any philosophy and practice of enthusiasts of “life in harmony with nature” don’t give and cannot give the decisions. To make machines or reactors more safe and to clear the smoky gases technically it is quite possible but for it there is not enough money – just it is the problem. That is to say not the technology, not “the progress” are guilty in the pollution but, first of all, the necessity “to feed people”. And when the catastrophe will approach, whether will people have understood what the deep reason of it is?

“The peace between people, a man and nature... it is an embodiment of true harmony and unity, it is experience of “expiation” in the world and inside oneself, it is the end of alienation and returning of a man to himself... The exit is in activation of an individual and humanization of the technology... Peace between a man and nature is a harmony between them. Nature doesn’t any more threaten a man, he any more doesn’t intend firmly to conquer nature... The creation of a healthy society assumes that a man will not blindly but reasonably adjust the relations with nature” (Erich Fromm).

The following words and word phrases will be helpful:

Vaguely blame – обвинять неопределенно, неясно, смутно;  
 completeness of researches – научное завершение исследований;  
 to be guilty – быть виновным;  
 embodiment – воплощение, объединение, слияние;  
 expiation – искупление; alienation – отдаление, отчуждение;  
 to conquer – завоевывать;  
 to assume – принимать, предполагать, допускать;  
 to adjust – регулировать, улаживать, приводить в порядок.

**VI. Complete the following statements:**

1. The philosophers and publicists only vaguely blame ... .

2. The scientists name the ecological crises as ... .
3. The real cause of crises is ... .
4. Ecology is not “a science about pollution” ... .
5. The thought rises to a level of the ecology when ... .
6. To make machines or reactors more safe and to clear the smoky gases technically it is quite possible but ... .
7. And when the catastrophe will approach, whether will people have understood ... .
8. “The peace between people, a man and nature... it is an embodiment of ... .
9. The exit is in activation of ... .
10. Peace between a man and nature is ... .
11. Nature doesn’t any more threaten ... .
12. The creation of a healthy society assumes that ... .

**VII. Say if these sentences are true (T) or false (F). Correct the false ones.**

1. The world is in crises and the problems of mankind are solved by their intellectual leaders.
2. The philosophers and publicists only vaguely blame “the dark sides of progress”.
3. The most “scientific” and serious is considered to list “reasons” of ecological crises.
4. The real cause of crises –necessity to feed and support the excessively increased population has been solved already.
5. The pollution of environment with specifically those or other substances is just a sanitary, technical problem.
6. Not the technology, not “the progress” are guilty in the pollution but, first of all, the necessity “to feed people”.
7. “The peace between people, a man and nature... it is the end of alienation and returning of a man to himself.
8. The exit is in activation of an individual and humanization of the technology...
9. The creation of a healthy society assumes that a man will blindly but unreasonably adjust the relations with nature.

**VIII. Answer the following questions:**

1. Are the problems of mankind solved by their intellectual leaders?

Учебно-методическое издание

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2. Who vaguely blame “the dark sides of progress”?
3. The scientists name the ecological crises as “technogeneous”, don’t they?
4. What are “reasons” of ecological crises and real cause of crises?
5. Is ecology “a science about pollution” or not?
6. Do any philosophy and practice of enthusiasts of “life in harmony with nature” give and can give the decisions?
7. Will people have understood what the deep reason of it is when the catastrophe will approach?
8. The peace between people, a man and nature... it is an embodiment of true harmony and unity, isn’t it?
9. Is the exit in activation of an individual and humanization of the technology?
10. What does the creation of a healthy society assume?

**IX. Do you agree with happy wish of Erich Fromm or do you have another point of view of solving ecological problems and saving the Earth from ecological catastrophe? Split into pairs and speak on ecological problems to find the way out.**