



Food and Agriculture Organization
of the United Nations

STEP 2

Core Criteria of Performance

TAPE : Tool for Agroecology Performance Evaluation





STEP 2: Core criteria of performance

Main dimension	#	Core criteria of performance	Proposed method of assessment in survey
Governance	1	Secure land tenure (mobility for pastoralists)	Type of tenure over land: property, lease + duration, verbal, not explicit (SDG 1.4.2, 5.a.1 and 2.4.1 sub-indicator 11) Existence and use of pastoral agreements and mobility corridors
	2	Productivity	Gross output value per hectare (SDG 2.4.1 sub-indicator 1) Gross output value per person
Economy	3	Income	Income from crops +animals +other activities +subsidies –inputs –operating expenses –depreciation –taxes –interests (SDG 2.4.1 sub-indicator 2)
	4	Added value	Gross output value –depreciation –expenditures for inputs
Health & nutrition	5	Exposure to pesticides	Quantity applied, area, toxicity and existence of risk mitigation equipment and practices
	6	Dietary diversity	Minimum Dietary Diversity for Women - FAO & FHI (2016)
Society & Culture	7	Women's empowerment	Abbreviated Women's Empowerment in Agriculture Index, A-WEAI (IFPRI, 2012)
	8	Youth employment	Access to jobs, training, education or migration (SDG 8.6.1)
Environment	9	Agricultural biodiversity	Relative importance of crops varieties, livestock breeds, trees and semi-natural environments on farm (SDG 2.4.1 sub-indicator 8.1, 8.6 and 8.7)
	10	Soil health	SOCLA agroecological method to assess soil health, based on 10 indicators (Nicholls et al., 2004)





5. Exposure to pesticides

EXPOSURE TO PESTICIDES

Consider the LAST 12 MONTHS as reference period.

- * How many different chemical pesticides have you used in the last 12 months of productive activity?**

Please consider any kind of pesticide, herbicide, insecticide, fungicide and other similar substances.



List top 10 chemical pesticides used





List of pesticides

Name of the pesticide

Faena

* Level of toxicity

Categories	Signal word	Oral LD ₅₀ (mg/kg)	Dermal LC ₅₀ (mg/kg)	Inhalation LD ₅₀ (mg/L)
I Extremely/highly toxic	DANGER POISON/DANGER	0 to 50	0 to 200	0 to 0.2
II Moderately toxic	WARNING	50 to 500	200 to 2000	0.2 to 2.0
III Slightly toxic	CAUTION	500 to 5000	2000 to 20000	2.0 to 20
IV Relatively non-toxic	CAUTION [optional]	5000+	20000+	20+

When selecting the level of toxicity for each pesticide, please refer to the table above.

none selected

Amount of active ingredient (%)

35,6%

* Quantity of product used

0.1

Unit of measure

none selected

liters

Amount of area in which the pesticide has been used (ha)

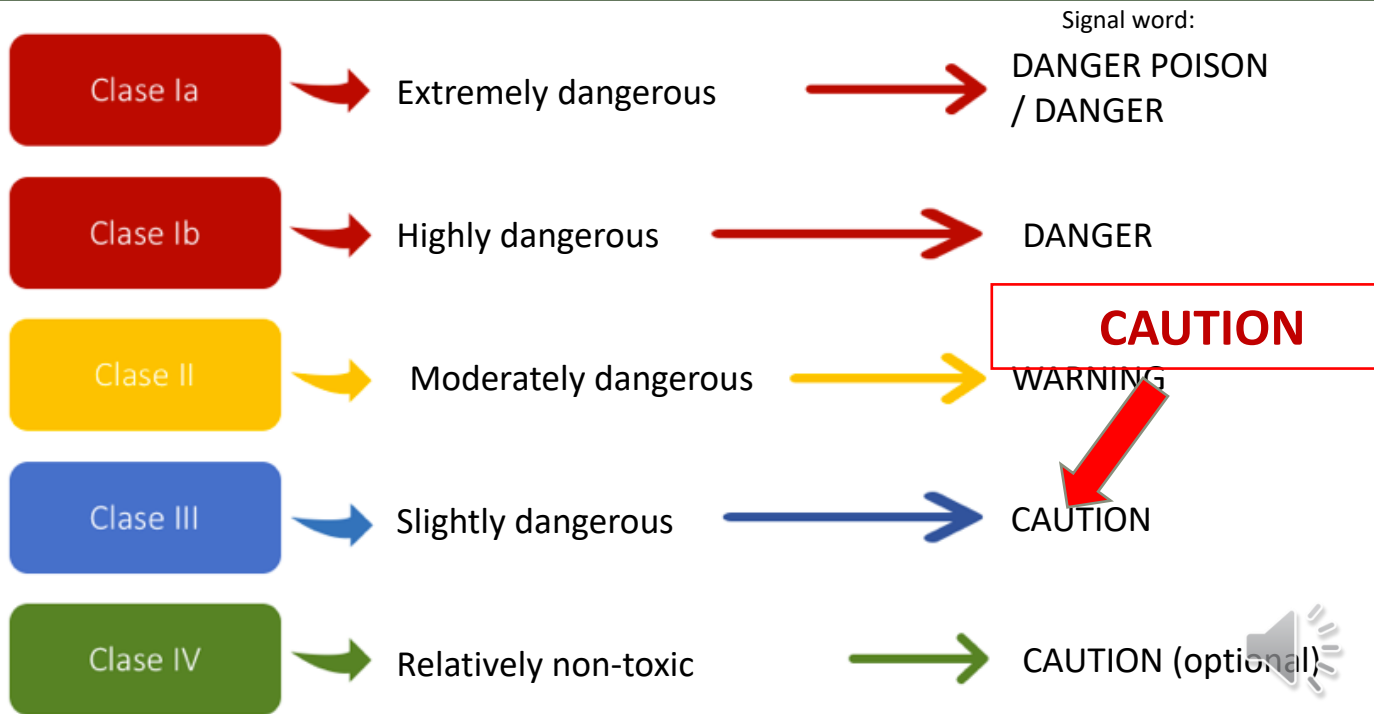
0.5

On which crop? **Maize**





Classes of pesticides





5. Exposure to pesticides

*** Total expenditure for chemical pesticides:**

Please express this value in the currency previously specified ().

*** How many different organic pesticides have you used in the last 12 months of productive activity?**

Please consider any kind of organic pesticide, herbicide, insecticide, fungicide and other similar substances.





Organic pesticides

Name of the pesticide

Source: self-produced or purchased?

*** Quantity of product used**

Unit of measure

Amount of area in which the pesticide has been used (ha)

*** Total expenditure for organic pesticides:**

Please express this value in the currency previously specified ().





Mitigation strategies

*Mitigation strategies when applying?

Select as many as necessary. Leave it blank if no mitigation strategies are in use or if the question is not applicable.

- ☐ Mask
- ☐ Body protection (glasses, gloves, etc.)
- ☐ Special protection for women and children
- ☐ Visible signs of danger after spraying
- ☐ Community is informed of the danger
- ☐ Secure disposal of the empty containers after use
- ☐ Other
- ☐ None of these

*Ecological management of pests

Select as many as necessary. Leave it blank if there is no ecological management of pests or if the question is not applicable.

- ☐ Cultural control (more resistant varieties are chosen for production; plants and fruits presenting signs of disease are removed manually; crops are grown in crop rotation and intercropping schemes, etc.)
- ☐ Plantation of natural repelling plants
- ☐ Use of cover crops to increase biological interactions
- ☐ Favor the reproduction of beneficial organisms for biological-control
- ☐ Favor biodiversity and spatial diversity within the agroecosystem
- ☐ Other
- ☐ None of these





Opinion about pesticides

Which type of pesticides are more important for your production?

- ☐ Pesticides use is negligible (neither chemical nor organic) ecological management is more important.
- ☐ Organic pesticides are more important.
- ☐ Nor organic, nor chemical, no ecological management.
- ☐ Chemical and organic pesticides have the same importance.
- ☐ Chemical pesticides are more important.

Do you use antibiotics on your livestock?

- ☐ I do not use antibiotics at all
- ☐ For treatment of diseases only
- ☐ For prevention of diseases only
- ☐ For both prevention of diseases and growth promotion
- ☐ For growth promotion





Analysis of performance for EXPOSURE TO PESTICIDES

- **Green (desirable):**

Quantity of organic pesticides used \geq Quantity of synthetic pesticides used

AND pesticides of class I and II (highly and moderately toxic) are NOT used

AND at least 4 of the listed mitigation techniques are used when applying chemical pesticides]

OR [Chemical pesticides are not used AND organic pesticides AND/OR other integrated techniques for pest management are used]

- **Yellow (acceptable):**

Quantity of synthetic pesticides used $>$ quantity of organic pesticides used

AND producers do not use pesticides of class I (Highly toxic)

AND at least 4 of the listed mitigation techniques are used when applying the chemicals

AND organic pesticides and/or other integrated techniques are also used

- **Red (unsustainable):**

[Producers use highly hazardous pesticides (Class I) and/or illegal pesticides]

OR [producers use pesticides of class II and/or III (Moderately toxic and Slightly or relatively non- toxic) with less than 4 of the listed mitigation techniques]

OR [producers use chemical pesticides of any class AND no organic pesticides and no other integrated techniques are used]





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STEP 2

Core Criteria of Performance

YOUTH EMPLOYMENT





STEP 2: Core criteria of performance

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8. Youth empowerment and emigration

YOUTH EMPLOYMENT AND EMIGRATION

Please note that this section refers only to the young members of the household, currently living in it or emigrated but previously part of it.

- * How many young members (15-24 years) are there in the system assessed (including those emigrated and currently living outside it)?





EMPLOYMENT

*This section asks information about the **main** activities carried out by the young members of the evaluated system. For example, if there is a young member both studying and working in the agricultural production of the system, who spends most of his time studying and going to school, then you should consider him/her as mainly involved in education/training, therefore not listing him/her also among the young people who work mainly in the agricultural production of the system.*

Number of young people (mainly) working in the agricultural production of the system assessed

* Male

* Female

Number of young people (mainly) in education/training

* Male

* Female

Number of young people not in education/training nor working in agriculture, nor in other activities

* Male

**1. Agricultural production
(within the farm)**

2. Education and training

**3. Nor education, nor
training, nor employment**

**4. Employment outside the
farm**





EMIGRATION



Number of young people who have left the community/village for lack of opportunities

* Male

* Female



Number of young people that would like to continue the agricultural activity of their parents

* Male

* Female



Number of young people that don't want to work in agriculture and would emigrate if they had the chance

* Male





Analysis of performance for YOUTH EMPOWERMENT

- **Green (desirable):**

Average score is $\geq 70\%$;

- **Yellow (acceptable):**

Average score is $\geq 50\%$ and $< 70\%$;

- **Red (unsustainable):**

Average score is < 50





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STEP 2

Core Criteria of Performance

WOMEN'S EMPOWERMENT





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7. Women's empowerment

WOMEN'S EMPOWERMENT

*Survey to be conducted only with the main woman in the household without the presence of a man in a safe environment. In order to visualize this section, please specify the number of women (both young and non-young) in the household in the dedicated fields in **Step 0**.*

As you specified - in Step 0 - that there are **NaN** women (both young and non-young) in the household, you are asked to complete this section. If you have made a mistake in specifying the number of women, you can change your answer by going back to Step 0.

Is the woman answering with the presence of a man?

- ☒ Yes
☐ No

Has the man refused to leave despite knowing that this part of the test is for women only?

- ☐ Yes
☐ No

1. Time Burden

2. Property and decision making

3. Decision making about revenue

4. Perception about decision making

5. Leadership





TIME BURDEN

Share of working time spent working on AGRICULTURAL PRODUCTION within the system assessed

* Men

If you don't engage in this kind of activity, please select the option "None to little (<10%)".

none selected

- ☐ None to little (<10%)
- ☐ Less than half (10%-39%)
- ☐ About half (40%-59%)
- ☐ Most/almost all (60%-99%)
- ☐ All (100%)

(Aged less than 18 years)

If you don't engage in this kind of activity, please select the option "None to little (<10%)".

none selected

Female children

(Aged less than 18 years)

If you don't engage in this kind of activity, please select the option "None to little (<10%)".

none selected

The sum of the 3 activities
cannot be more than
100%



1. Amount of time dedicated to agricultural production
2. Amount of time dedicated to food preparation and domestic works
3. Amount of time dedicated to other activities generating income





TIME BURDEN

In total, do you work more than 10.5 hours per day?

No, I work less than 10.5
hours per day

Yes, I work more than
10.5 hours per day

***Men**

☐☐

***Women**

☐☐

Male children

(Aged less than 18 years)

☐☐

Female children

(Aged less than 18 years)

☐☐



PROPERTY and DECISION MAKING

DECISION-MAKING

Do women make decisions on what to produce? Do women make decisions around what to do with the outputs produced (such as control over the income or whether to consume at home)?

* Who is the owner of the assets for other economic activities within the household?

none selected



- ☐ Myself (woman)
- ☐ My husband (man)
- ☐ Both of us
- ☐ Someone else

about other economic activities within the household,
decisions?

* Who is the owner of the MAJOR HOUSEHOLD ASSETS?

(house, machineries, etc.)

none selected

* When decisions are taken about MAJOR HOUSEHOLD ASSETS, who normally takes these decisions?

none selected

Property of:

1. Crops and seeds

2. Animals

3. Main assets of the household

4. Minor assets of the household

For each of these categories of assets you have to specify who is the owner

...and, in the same way, who takes decisions about these assets





DECISION MAKING About REVENUE

DECISION-MAKING ABOUT REVENUE

* How much did you contribute to the decisions about the use of the REVENUE generated through OTHER ECONOMIC ACTIVITIES?

none selected ▼

- ☐ Did not contribute or contributed in few decisions
- ☐ Contributed in some decisions
- ☐ Contributed in most decisions

out OTHER ECONOMIC

none selected ▼

* If you wanted, do you feel that you can take decisions about MAJOR HOUSEHOLD EXPENDITURES?

none selected ▼

* If you wanted, do you feel that you can take decisions about MINOR HOUSEHOLD EXPENDITURES?

none selected ▼





PERCEPTION about DECISION MAKING

PERCEPTION ABOUT DECISION-MAKING

* If you wanted, do you feel that you can take decisions about OTHER ECONOMIC ACTIVITIES?

none selected ▼

- * ☐ I think that I cannot take any decision
- ☐ Just little decisions
- ☐ Some decisions
- ☐ In great part / totally

decisions about MAJOR HOUSEHOLD

* If you wanted, do you feel that you can take decisions about MINOR HOUSEHOLD EXPENDITURES?

none selected ▼





LEADERSHIP

Men and women face different barriers to participation. Within the country/context, are both men and women within the household included and able to participate in the agroecology projects?

Do these groups exist in your community?

	Yes	No
*Women's associations and organizations	<input checked="" type="radio"/>	<input type="radio"/>
*Cooperatives for rural production	<input type="radio"/>	<input type="radio"/>
*Social movements	<input type="radio"/>	<input type="radio"/>
*Unions of rural workers	<input type="radio"/>	<input type="radio"/>
*Political groups linked to a party	<input type="radio"/>	<input type="radio"/>
*Religious groups	<input type="radio"/>	<input type="radio"/>
*Training organized for capacity development	<input type="radio"/>	<input type="radio"/>
*Others	<input type="radio"/>	<input type="radio"/>





How often do you participate in activities and meetings organized by these groups?

* Women's associations and organizations

none selected ▼

* ☐ Never / Almost never

☐ Sometimes

☐ Most of the time

☐ Always

* Social movements





Analysis of performance for WOMEN'S EMPOWERMENT

- **Green (desirable):**

Average score is $\geq 80\%$;

- **Yellow (acceptable):**

Average score is $\geq 60\%$ and $< 80\%$;

- **Red (unsustainable):**

Average score is < 60





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STEP 2

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MINIMUM DIETARY DIVERSITY





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MINIMUM DIETARY DIVERSITY FOR WOMEN

This section should preferably be conducted with a woman aged 15-49 years old. If there are no family members with such requirements, the survey may continue to be conducted with the family member who was already being interviewed.

Select what you ate or drank in the last 24 hours. Please include all foods and drinks, any snacks or small meals, as well as any main meals. Remember to include all foods you may have eaten while preparing meals or preparing food for others

10 groups of food



	Yes, I ate it in the last 24 hours	No, I did not eat it in the last 24 hours			
* GRAINS, WHITE ROOTS and TUBERS (bread, rice, pasta, flour, white potatoes, white yams, manioc / cassava / yucca, taro, etc)	<input type="radio"/>	<input type="radio"/>	* EGGS from poultry or any other bird	<input type="radio"/>	<input type="radio"/>
* PULSES (beans, peas, fresh or dried seed, lentils or bean / pea products, including hummus, tofu and tempeh)	<input type="radio"/>	<input type="radio"/>	* DARK GREEN leafy VEGETABLES (any medium to-dark green leafy vegetables, including wild / foraged leaves)	<input type="radio"/>	<input type="radio"/>
* NUTS and SEEDS (Tree nut, groundnut/peanut or certain seeds, or nut / seed "butters" or pastes)	<input type="radio"/>	<input type="radio"/>	* DARK YELLOW or ORANGE FRUITS and VEGETABLES (mango, papaya, pumpkin, carrots, squash, orange sweet potatoes)	<input type="radio"/>	<input type="radio"/>
* DAIRY products (Milk, cheese, yoghurt or other milk products but NOT including butter, ice cream, cream or sour cream)	<input type="radio"/>	<input type="radio"/>	* other VEGETABLES (cucumber, eggplant, mushroom, onion, tomato, etc.)	<input type="radio"/>	<input type="radio"/>
* MEAT, POULTRY, FISH (Beef, pork, lamb, goat, chicken, fish, seafood, animal organs)	<input type="radio"/>	<input type="radio"/>	* other FRUITS (avocado, apple, pineapple, etc.)	<input type="radio"/>	<input type="radio"/>





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1. Grains, white roots and tubers





2. Pulses





3. Nuts and seeds





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4. Dairy products





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5. Meat, poultry, fish





6. Eggs





7. Dark green leafy vegetables





8. Dark yellow or orange fruits and vegetables





9. Other vegetables





10. Other fruits





Analysis of performance for DIETARY DIVERSITY (for women)

- **Green (desirable):**

Average score is ≥ 7

- **Yellow (acceptable):**

Average score is ≥ 5 and < 7

- **Red (unsustainable):**

Average score is < 5





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STEP 2

Core Criteria of Performance

SOIL HEALTH





STEP 2: Core criteria of performance

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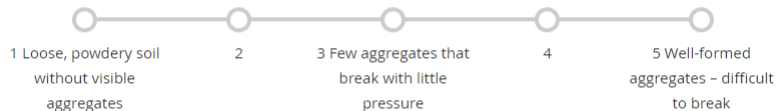


SOIL HEALTH

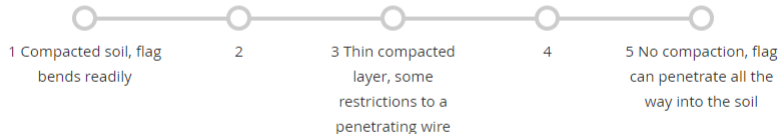
For the soil assessment, choose a surface of the productive area that most reflects the average status of its soils.

Mark every category with a score comprised between 1 and 5 following examples.

*Soil structure



*Soil compaction



*Soil depth



10 indicators of soil health

Descriptive scale from 1, the worst state, to 5, the best

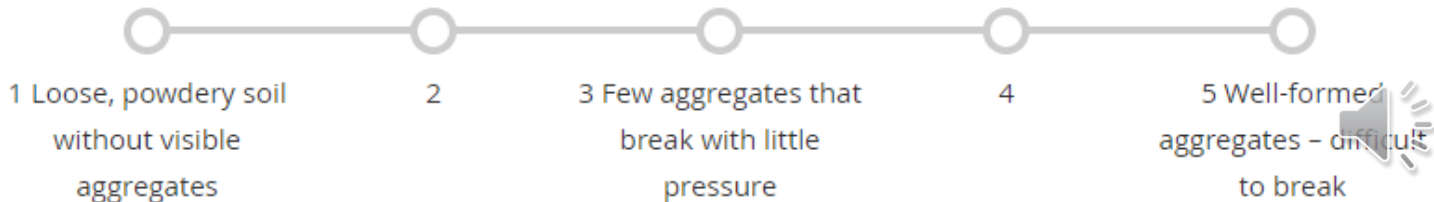




1. Soil structure



* Soil structure

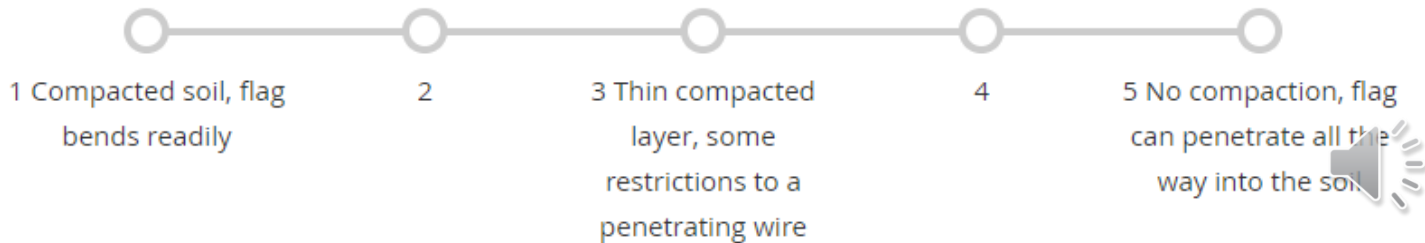




2. Compaction

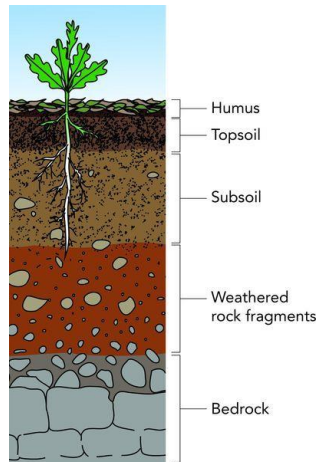


*Soil compaction





3. Depth of superficial soil



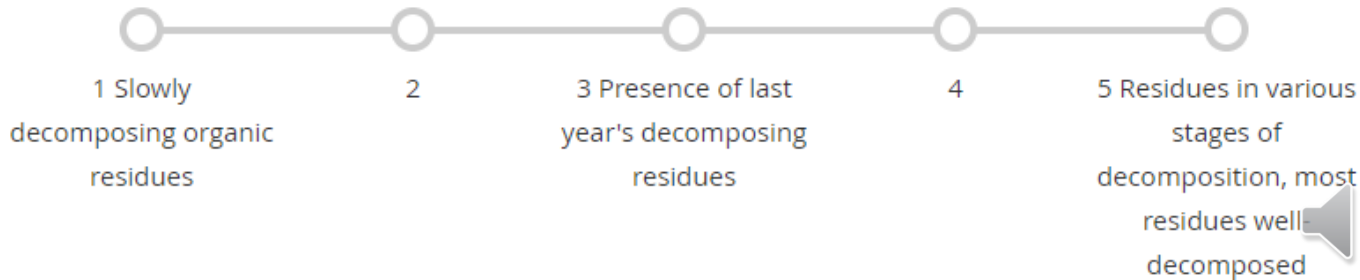
* Soil depth





4. Status of residues

*Status of residues

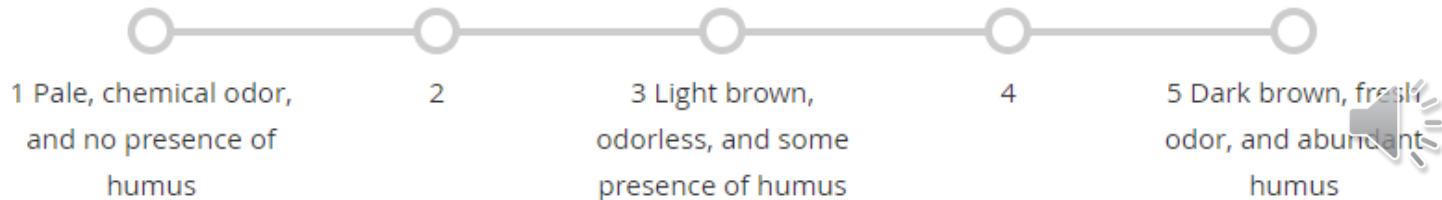




5. Colour, odor and organic matter



* Color, odor, and organic matter





6. Water retention (moisture level after watering)



***Water retention (moisture level after irrigation or rain)**

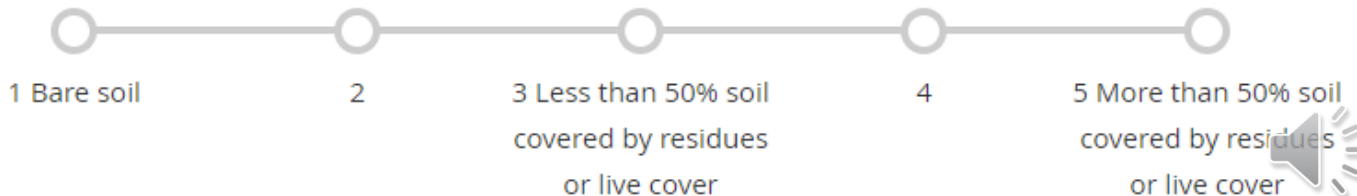




7. Soil cover



*Soil cover

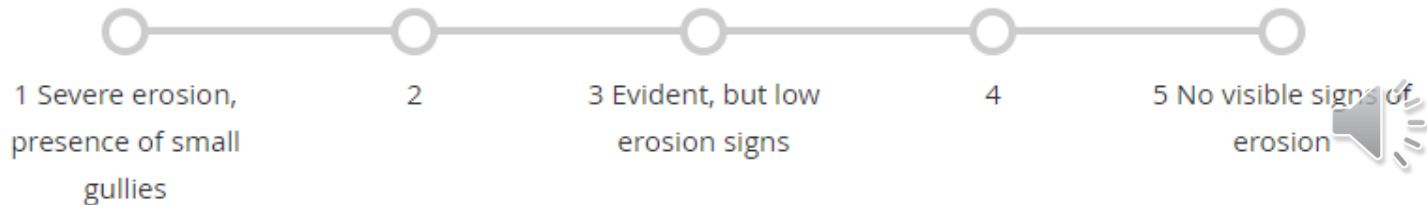




8. Erosion



*Erosion

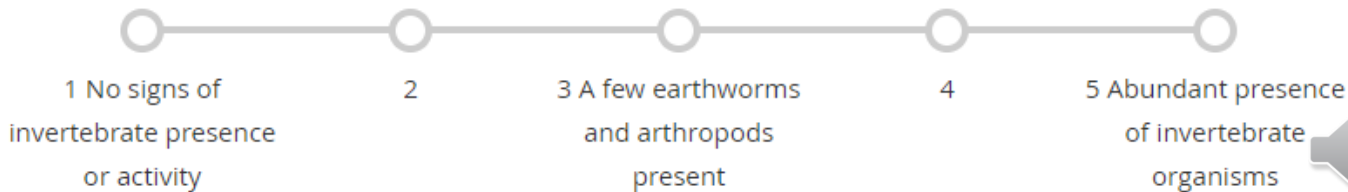




9. Presence of invertebrates



* Presence of invertebrates

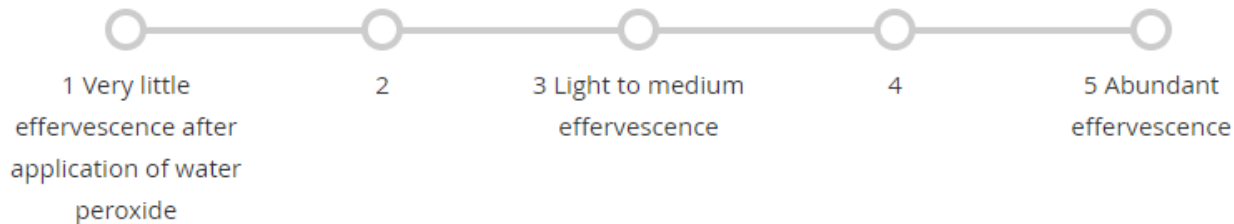




10. Microbiological activity



Microbiological activity





Analysis of performance for SOIL HEALTH

- **Green (desirable):**

Average score is ≥ 3.5

- **Yellow (acceptable):**

Average score is ≥ 2.5 and < 3.5

- **Red (unsustainable):**

Average score is < 2.5





STEP 1 and 2 : Example from 2 farms in Cambodia

STEP 1 CAET



STEP 2: Criteria of Performance

Core criteria of performance	Takeo farm	Kampong Chhnang farm
Secure land tenure	Formal document of possession of land	Formal document of possession of land
Productivity	N/A	N/A
Income	12.223 USD	0 USD
Added value	12.330 USD	-1.000 USD
Exposure to pesticides		
Dietary diversity	9/10	5/10
Women's empowerment	93.9%	55.7%
Youth employment	N/A	N/A
Agricultural biodiversity	42%	33%
Soil health	3.2	3.5

