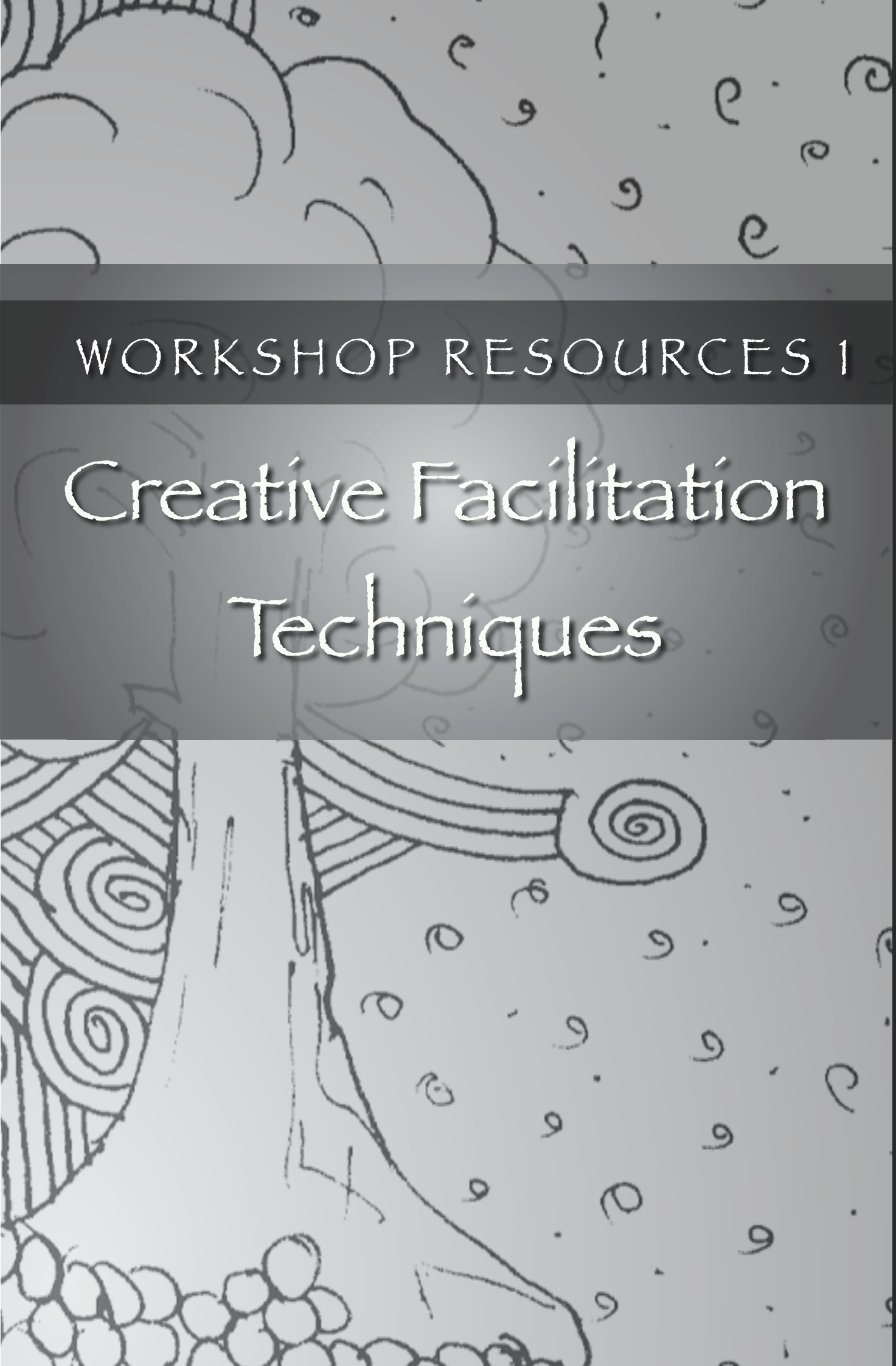
WORKSHOP RESOURCES 1

Creative Facilitation Techniques



Resources for Permaculture Workshops & Follow up - Creative Facilitation Techniques

Notes...

Introduction

What is a facilitator?

- A facilitator does not stand in front of a group and lecture.
- A facilitator is an active unbiased member of the learning process.
- The role of the facilitator is to skillfully assist a group of people to understand their common objectives and to help them to achieve these objectives without taking sides in any argument.
- The facilitator guides and helps achieve understanding and consensus.

In many ways a facilitator is like a midwife
• A midwife assists in the process of creation •
but is not the producer of the end result

The basic skills of a facilitator

- Following good meeting practice
- Timekeeping
- Following an agreed agenda
- Assisting a group to brainstorm and problem solve

An experienced facilitator will also have the following skills:

- The ability to intervene in a way that adds creativity to a discussion rather than leading the discussion and taking away creativity from the group
- The ability to understand the group process and dynamics – successfully address these inequalities in the group dynamic
    - Who is dominating in the group? And how stop them
    - Who is withdrawn? And how to involve them
    - Who looks bored? And how to draw them in to the process

Good facilitation skills cannot just "be taught" – they need to be learned.

The more we practice our creative facilitation techniques the more comfortable we become within ourselves and with the workshop participants.

The most important lesson of all is to have FUN.

- Workshops need to be enjoyable for both the workshop participants and the workshop facilitator - a joyful learning environment will greatly assist the learning process.
- Workshop participants will remember vital information if the information is presented in a lively way.

To get the most from a workshop, all participants need to be comfortable with one another.

If workshop participants are not introduced properly, sit passively at tables, or are not given interesting tasks they will lose focus very quickly. The workshop dynamic will be less effective and the learning environment can be dull and unproductive.

If the facilitator just stands in front of a workshop group and lectures this will only result in bored participants who will probably stop listening after 10-15 minutes.

This is not an effective way to share information and knowledge. Try instead to link fun and energizing activities to the workshop material. These activities can be used to introduce important concepts, and / or as a lead-in to the workshop exercises.

A good facilitator will design workshops that combine learning and information sharing with interactive tools for group work.

Facilitators know when they are successful when they look at a group of happy, smiling faces.

Achieving a happy workshop is not difficult. The facilitator simply needs to build up a repertoire of techniques or tools to help keep the workshop participants focussed on and interested in the workshop material.

Good facilitation techniques should...

- Help the participants to be comfortable with each other
- Create a fun and interesting learning environment
- Boost the energy levels of workshop participants
- Organize interesting and productive group work activities
- Use participatory activities which enable dynamic reviews of what has been learnt
- Increase group activity so that workshop participants can expand on the new knowledge they have received and localise that knowledge

This chapter includes an introduction to creative facilitation skills as well as some examples of facilitation techniques and tools which facilitators can try and adapt to best suit their workshop and learning activities.

All facilitation techniques should be adapted to local cultural environments.

You are the facilitator.

Choose what you think will work, play with it and create your own fun games to energise your workshop participants.

As the facilitator it is up to you to choose what will and won't work with the participants of your workshop.

About planning and adapting creative facilitation

It is good to plan and trial creative techniques before using them at a workshop.

- You can practice and design new ideas with your friends or work colleagues.
- Discuss ways to adapt the techniques so they are in accordance with the workshop material and assist the general aims and outcomes of the workshop.
- Make sure that your techniques are culturally appropriate and do not offend any local ethnic, religious or gender sensibilities

This chapter introduces several types of creative facilitation techniques including...

- **"Icebreakers"**
- **Energizers**
- **Forming Groups**
- **"Living Metaphors"**
- **Dynamic Lead-Ins**
- **Dynamic Reviews**
- **"Brainstorms"**
-

Notes...

Icebreakers

Participants often enter a workshop as strangers and / or apprehensive about what will happen during the workshop. Right from the beginning of the workshop it is important to take some time to allow the participants to get to know one another, to get to know the facilitator(s) and to create a sense of team working and camaraderie.

"Icebreakers" are techniques which can be very helpful to:

- Help participants get to know each other and become comfortable with each other at the beginning of a workshop
- Help energize participants at the beginning of a new stage of a workshop
- Encourage team working and creative problem solving

Icebreaker No. 1 - Stand up if you . . .

This is a useful opening exercise. As the facilitator you can ask a series of fun, general questions or some more specific questions relevant to the workshop. This way as a facilitator you will get a snapshot of existing experience of the workshop participants.

Materials Required

No materials need to be prepared for this activity.

The facilitator needs to think about a list of questions before running the exercise.

These can be :

- General questions - to get the participants laughing and offering a little bit of information about themselves
- More specific questions linked to the workshop material

Time Required

This is a fairly quick exercise. The time needed will be determined by the number of questions that are asked.

What to do

Ask questions of the participants using the following opening words: "Stand up if you …"

For example: Stand up if you …

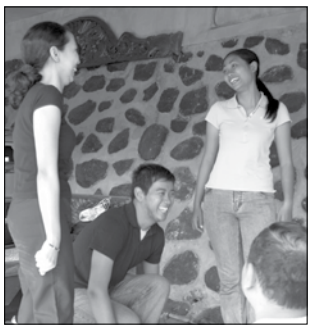
…are already married

…are still single

…are looking for a prospective marriage partner

It is best if each question is a little more risqué than the last. But remember to make sure that the questions are culturally and gender appropriate and do not offend any of the participants.

You can also design questions to bring out participants' talents and highlight diversity and / or common characteristics of participants' existing knowledge.



For example: Stand up if you …

… can speak more than one / two / three languages

… can cook (name a favorite local dish)

… can dance (name a local dance)

You can also use questions that will tell you what prior experience people have in the areas that the course will cover:

For example: Stand up if you …

… grow your own vegetables

… raise chickens, cows or other animals

… make money from your vegetables or animals

… use composting for your gardens

… want to learn how to make more money from the crops you grow

Variation

One variation is to open the question using the following words: "Have you ever…?" You can use a mix of fun questions as well as questions relating to the workshop material.

For example: Have you ever …

… climbed to the highest point in your country?

… been displaced from a place where you lived?

… sung karaoke?

… gone without a shower for more than 2 days?

… been to a workshop?

… found it difficult to find drinking water for your family?

… used organic fertilizer?

Facilitator's Tips

This should be a quick, fun activity to help the participants laugh and help them to feel comfortable, You can follow this activity with other icebreaker exercises such as Introduce Your Partner, Do You Know Me ? or Introduction Through Musical Chairs.

Icebreaker No. 2 - Introduce Your Partner

This icebreaker provides time for participants to get to know each other and gives them an opportunity to practice their inquiry skills.

Materials Required

Participants will need a notebook / card and a pen / pencil to record their answers.

Prepare some example questions on large enough paper so that everyone can see them.

Example questions could include:

- What is your name?
- What is your background?
- Why are you involved in this workshop?
- What is the best learning experience you have ever had?
- What do you hope to learn from this workshop?
- Do you have previous experience in the subject matter of this workshop?

Time Required

- 10 minutes for interviews
- Each participant is given a maximum 5 minutes to introduce their partner

What to do

1. Divide the group into two-person teams by asking them to them find a partner that they know the least about.
2. The pairs then interview each other for about 10 minutes.
3. After the interviews, reassemble the group into a big circle and have each participant introduce their partner to the group. Ask both participants to stand up for the introduction.

Facilitator's Tips

- To avoid this process taking up too much time the introductions should be short and brief. Let the participants know that the introduction of each partner should take a maximum of 5 minutes each.
- You can encourage the participants to applaud the introductions, which will help build their enthusiasm.

Icebreaker No. 3 - Circle of Friends

This is a great greeting and departure exercise for large groups of participants who are attending a short seminar or a workshop where the chance of everyone meeting everyone at the same time again is unlikely.

Time Required

- This is a fairly quick exercise
- The time required will depend on the number of participants

What to do

1. Form two large circles, one outer circle and one inner circle - the participants in the inner circle should be facing participants in the outer circle
2. Ask the participants in each circle to take one step in opposite directions - ie. the outer circle participants step to the right while the inner circle step to the left

1. The participants greet each new person as the circle continues to move around
2. The participants can greet each other by simply saying one word that they think expresses something they feel, right now, or something that is important to remember

Facilitator's Tips

- To speed up the process divide the participants by assigning them number 1 or 2
- Those given the number 1 form the outer circle
- Those given the number 2 form the inner circle

"Energizers"

There are times when people's energy is low during workshops, particularly after a long lecture or after a break. After lunch time workshop participants tend to be tired while they are still digesting. "Energizers" are fast and fun ways to :

- Get people laughing
- Put people at ease
- Get participants refocused on the workshop

Energizer No. 1 - Truth & Lies

Materials Required

- Each participant needs a note pad / card and pen / pencil

Time Required

This is a fairly quick exercise - each participant needs about 2 or 3 minutes. The entire energizer usually doesn't take more than 20 minutes

What to do

1. Participants write on cards / note pads two truths about themselves and one lie.
2. The participants then walk around sharing with one another their three statements - **during this time participants should not reveal which of the statements is a lie.** During this sharing it is the goal of the participants to :
   a) Convince others that your lie is true
   b) Guess the correct lie of the other participants

3. The participants gather back together in a circle and the first person reads aloud their statements to remind everyone. For example:

   "I was born in Malaysia."
   "I have three children."
   "I am a vegetarian."

4. **The group then tries to guess which of the three statements is not true** - at each end of each statement ask for a vote through a show of hands. "Who thinks this statement is true? Raise your hand."
5. The participant then reveals says which of the statements is untrue.

Facilitator's Tips

- For large groups (30+), it is best to split into smaller group sizes.
- Give examples (like the above) of statements and remind people that they should use short statements.

Energizer No. 2 - Knots of People

This is a fun activity game in which participants work together to solve a problem.

Time Required

This is a fairly quick exercise - the time needed depends on how long it takes for the first group to untangle itself.

What to do

1. Divide the group into teams of 8 to 12 members (note: less people than this per group won't work)
2. Have each person in the team raise their left hands in the air. Then have each person join right hands with another person in the team - but it must be someone that is NOT standing immediately to the left or right of them.
3. Then have each person join left hands with another person in the team - but again it has to be someone who is NOT standing immediately to the left or right and it has to be a new person on the team than they already joined their right hands with.
4. The teams have to untangle themselves without letting go of hands.
    - They may have to loosen their grips a little to allow for twisting and turning.
    - They may also have to step over or under other people.
5. The first group to untangle their knot is the winner.

Facilitator's Tips

There are four possible solutions to the knot:

- One large circle with people facing either direction
- Two interlocking circles
- A figure eight
- A circle within a circle

Energizer No. 3 - Earthquake!

This exercise works best with large groups – more than 20 participants.

Time Required

This is a fairly quick exercise. The facilitator can stop the activity after a few rounds and / or once the participants are feeling refreshed.

What to do

1. Divide the workshop participants into three equal groups. It is easiest to assign each participant a number (1 – 2 – 3) and participants form their groups based on the number they have been assigned.
2. All of the participants from Group 1 are asked to find a partner from Group 2. These partners face one another, raise their arms and place their palms together forming a "house".
3. Each of the participants from group 3 then choose a "house" and "hide" underneath it.
4. The facilitator then yells "QUAKE!!" and the participants hiding under the "houses" must find another partner who was also hiding under a "house".
5. At the same time the participants who were forming "houses" need to scramble and find a "new house" to hide underneath. Note: Those that were forming houses in the first round are not allowed to form a house again.
6. Each time this is done 1/3 of the participants are left without a "house" in which to hide and they are eliminated from the game.
7. Continue until there are only three participants left – two forming a house and one participant hiding underneath.

Facilitator's Tips

The facilitator may need to set some ground rules in order to avoid this game becoming too chaotic. No pushing, punching or kicking etc.

- Participants who were forming "houses" cannot form a house again. They must try and find a "new house" to hide under. Similarly, participants who were hiding under a "house" cannot hide under a "house" again.
- To avoid confusion tell participants who were hiding under the "houses" to shout out "Over here! Over here!" in order to identify each other.

Energizer No. 4 - Line-Ups

This is an activity that is good for groups of 16 or more.

Materials Required

The facilitator will need to think of a number of criteria for the line ups (see samples below).

Time Required

This is a fairly quick exercise. Time needed will depend on how many times the exercise is run. Each run of the exercise usually takes about 5-7 minutes.

What to do

1. Organize the participants into two or more groups of 8 to 20 people.
2. The facilitator tells the participants that in the Line Up they will have a chance to learn things about one another they may never think to ask.
3. The facilitator tells the groups that this is a competition, and that when they are asked to line-up in a particular way the first group to do so wins, so they need to get into the lines as quickly as possible. **For example:** Tell the groups to line up by height (shortest to tallest) and to all clap when they have finished.

   Other line up criteria possibilities:

   - Line up in order by shoe size
   - Line up in order by length of arm's reach
   - Line up in order alphabetically by first name
   - Line up in order by date of birth from January to December
   - Line up in order by number of brothers and sisters you have
   - Line up in order by age
   - Line up in order by length of time in your current occupation
   - Line up in order by number of animals you own
   -

5. When any one group finishes the line-up all of that group's members should clap to indicate that they have finished.

Facilitator's Tips

Conduct a practice round first

It is best if the facilitator uses criteria that links to the workshop material

- Use this activity periodically throughout a long session and ask groups to come up with their own way of letting you know they have finished (e.g. yell, hum a song, put up their hands, etc.) This can add a lot fun to the exercise.

Forming Groups

Group work is especially useful with large workshops, creative thinking exercises and brainstorms. Group work will also make workshops more manageable. Unless it is culturally inappropriate, groups should be established with gender and age balance.

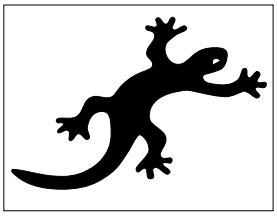
Note: If the facilitator notices that in any group there are dominant participants while the others are not taking an active role in discussions and activities, then the facilitator may form new groups or swap some of the participants around.

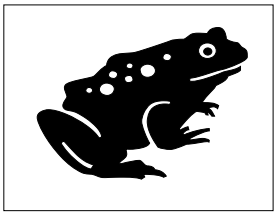
Forming Groups No. 1 - Animal Scramble

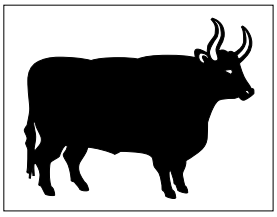
This is a way to form groups that is fun and relevant for agricultural programs.

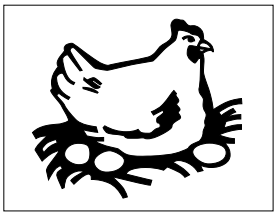
Materials Required

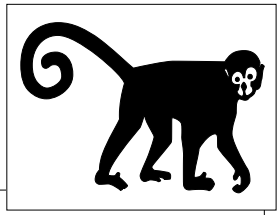
- Work out how many groups you want to form
- Create small 'animal cards' - as many types of animals as work groups needed for the exercise. For example, if you have 30 participants and need 5 groups you can use 6 x each Rooster, Cow, Goat, Horse, Cat etc. Choose animals that everyone knows the sound for, and are culturally appropriate.
- Write the same number of slips as the number of people that will form each group. Fold the slips and place them in a bag, basket or box











Time Required

This is a fairly quick exercise - takes about 10 minutes.

What to do

1. Each participant is asked to take one slip of paper - tell them that they are not allowed to open the paper yet
2. The facilitator instructs everyone to open their slips of paper and read the word written on the paper but to keep the word a secret
3. Now the facilitator instructs the participants to find the rest of their friends – but there is no talking allowed. Instead they have to make the sound of the animal. As soon as two participants find one another they should stick together and continue calling out until they find all of their animal friends

Facilitator's Tips

Use animals that everyone knows the sound for - the exercise may be confusing with abstract animals or animals from other areas.

- Choose appropriate animals. In some cultures use of dogs or pigs may be inappropriate, particularly in Islamic environments.

Forming Groups No. 2 - Picture Puzzles

Materials Required

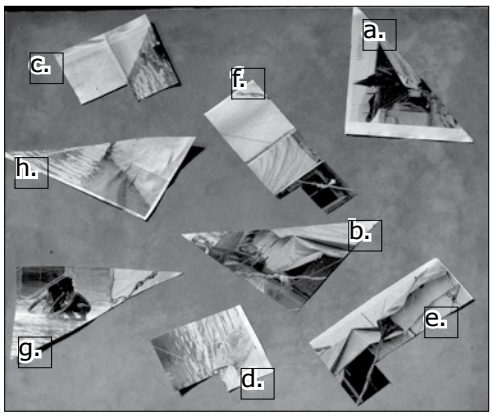
- Work out how many groups you want to form
- Create 'Picture Puzzles - as many different puzzles as work groups needed for the exercise. For example, if you need 5 groups you will need to make 5 different picture puzzles. The total number of all of the puzzle pieces should match the total number of participants.
- Pictures that could be used to make the puzzles could be:
  - Pictures that are relevant to the workshop material cut into pieces, or
  - 4 or 5 frames of a comic - IDEP Community Based Disaster Management comics can be used or other comic strips from newspapers
- Place all of the puzzle pieces in a bag, basket or box

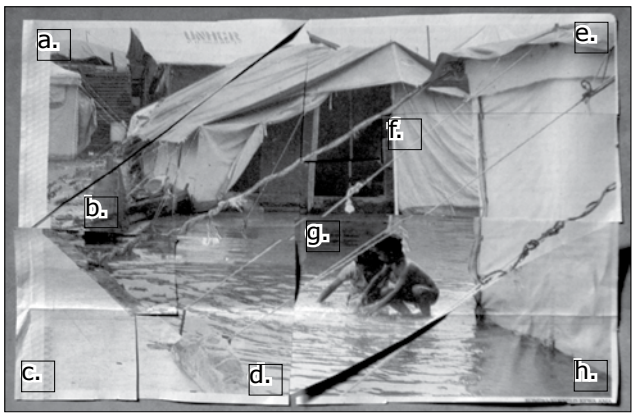
Time Required

This is a fairly quick exercise and should only take about 10 minutes

What to do

1. Each participant takes a turn picking a puzzle piece out of the container.
2. After each person has chosen one, the participants begin to search for others with puzzle pieces that can be joined to make the picture or comic strip.
3. After the participants have found everyone in their group, they need to re-create the pictures and / or put the comic strip story back in order.
4. Once they are done, the newly formed group can sit down to work together on a creative thinking exercise or design project.





Facilitator's Tips

It is best if the pictures or comic strips used are relevant to the workshop materials.

- Once the groups have formed themselves they could brainstorm the subject matter of the pictures / comics.

Living Metaphors

Living metaphors physically simulate important concepts or problems.

Living Metaphors No. 1 - Re-arrange the Classroom

This exercise is designed to achieve greater cooperation and coordination amongst the workshop participants.

Time Required

This is exercise and should take about 10 - 15 minutes

What to do

1. During a workshop break, the facilitator should set the workshop space up with the seating in rows, and set up the facilitator's desk / podium / flip chart at the BACK of the class.
2. When the workshop participants return to the workshop the facilitator should ask them to take a seat, and then walk behind them and begin the presentation of the next section of the workshop. **The participants will need to turn around to see what is going on** - they will likely be confused and uncomfortable.
3. The facilitator should then explain that in organizations or even at the community level change is often implemented in the same way. Community members are not an active part of the change process, but pushed into change by someone they cannot see and who decides, on their behalf, what they think is best for them. Explain that this way of instigating change is about as effective as conducting a workshop in this 'backwards' way.
4. Explain to the workshop participants that many formal organizations, including government departments, operate in the same way which makes communication and coordination difficult. And that productive changes occur much better by using good, communicating, cooperative teams.
5. Ask the participants rearrange the space so that more effective learning, communication, and teamwork can take place.
6. At the next break, ask the participants to rearrange the room again in a way that will further improve communication.
7. This can be repeated a few times, each time the new arrangement should reinforce a concept they have learnt in the workshop -ie. natural patterns etc.

Living Metaphors No. 2 - The Web of Life

This living metaphor activity simulates and deepens understanding about how the diverse elements of a living eco-system are interconnected.

Materials Required

- Index cards or name tags
- Marker pens
- Safety pins
- A ball of strong string or string equivalent in length to 5 metres per participant

Time Required

This exercise should take about 30 - 40 minutes including the explanations

What to do

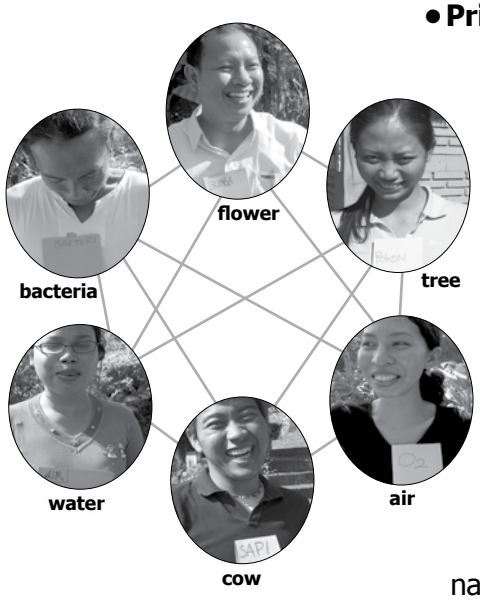
A. Orientation & identification of elements

1. Conduct a very brief discussion with the participants about the interconnections in nature and elements in those interconnected relationships.

2. Together, choose a local ecosystem - e.g. the ecosystem of the community where the workshop is being held such as a forest, coastal or a wet-rice paddy ecosystem as a focal point

3. Have each participant in the class identify & call out a key element of the local ecosystem. Write each of their answers down on a separate index card. The facilitator may need to prompt the participants to ensure that all of the important elements of the ecosystem are covered:

    - **Abiotic elements** (soil, water, sun, air)
    - **Producers** (e.g. plants and trees)
    - **Primary consumers** (e.g. animals that eat the plants)
    - **Secondary consumers** (e.g. animals that eat other animals)
    - **Decomposers** (which turn the waste of the plants and animals into nutrients for further growth)



4. The cards are shuffled and each participant & the facilitator draws a card from the deck, with the names facing down so that they don't know which card they are choosing.

5. Ask everyone to look at their card, think about what that element needs to survive and what it contributes to the environment and then safety pin the card to their shirts or insert the card into their name tag holders.

B. Make the 'Web of Life'


1


2


3


5


6

1. Ask everyone to form a circle.
2. The facilitator starts the process by taking the ball of string and looking around the circle for an element that either needs their element for survival or that their element needs to survive. The facilitator throws the ball of string to this person while explaining the relationship. For example:

   If you are water, you may choose rice and say aloud:
   "The rice plant needs water to grow".
   - or else -
   You might select a tree and say:
   "Water needs tree roots to stay in the ground".

3. The person who is now holding the ball of string looks around the circle, finds an element that either needs their element for survival or that their element needs to survive. **While holding on to a point in the string with one hand,** the person says what the relationship is, and throws the ball of string to the element they have chosen.
4. Continue this process until (a) all the elements are interconnected and (b) no-one can think of any more connections that can be made. Note: many of the elements are likely to be included in the web of relationships several times.
5. Now everyone, still holding on to the sections of string in hand, takes a step backward to make all the strands of string taut, and observes the web of relationships that has been created.
6. Demonstrate the interdependence of the various elements to the system, ask one element to gently begin tugging until other species feel the tug. Explain that the tugging represents pressure on the ecosystem through natural events (drought etc.) or human-made events (new plant introduction that crowds out the natural plants etc). How does it affect the system?
7. To emphasize the importance of each species in an ecosystem, ask participants to pick a component that seems the least important and have the person representing that element let go of his or her section of string. This represents the disappearance of a part of the system. How does this affect the rest of the system?

Other questions to consider might include:

- Could any part of the web be replaced? If so, with what?
- Are any members of the web in competition? How and for what?
- How do people influence the web?

C. 'Web of Life' follow up discussion

Write on the board a few human practices that strongly affect the ecosystem and the plant and animal species that make it up. For example, discuss the circle of effects of:

- Chemical pesticide use
- Land clearing
- Throwing trash into rivers

Living Metaphors No. 2b - Web of Life "Global Problems"

Using the same processes described earlier, you can explore **relationships between seemingly separate environmental and social problems.**

This time, the elements in the circle are various environmental and social problems such as:

- Air pollution
- Unsustainable use of natural resources
- Poor education
- Corruption
- Man made disasters
- Poverty
- Poor health
- etc.

When throwing the ball of string, the person gives a statement describing how the problem they represents is connected to the problem represented by another person in the circle.

For example:

- Poverty makes people use resources unsustainably
- Unsustainable use of forest resources causes the forests to disappear
- When the forests disappear, there is flooding
- Air pollution makes people sick
- Sick children are poorer learners

Living Metaphors No. 2c - Web of Life "Community Connections"

If the course is being held for people of a specific community, you can use the same processes described earlier **to explore relationships within a community.**

Used at the beginning of a course :

- Each person introduces themselves and their role in the community
- While keeping hold of a section of yarn in one hand, they toss the ball to another person in the group and expresses how their roles are interdependent
- The process continues, linking the individuals in the circle with multiple strands as everyone is introduced
- The facilitator then pulls on the starting thread and asks the group if anyone's hand failed to move
- The facilitator can then point out that this web is a physical metaphor for the interdependencies of the group and a key components of the processes they will be learning during the workshop

Used at the end of a course :

Each person tosses the ball of string to another person, stating something about how they have connected or been moved by this person and/or how they hope to keep cooperating with them after the course

Living Metaphors No. 3 - Chinese Whispers

This activity can help to increase understanding about the need to communicate directly instead of relying on second-hand information or rumors.

This exercise can be used as a fun way to introduce new workshop topics.

Time Required

This exercise should take about 10 minutes

What to do

1. The facilitator chooses a short sentence. It is best to choose a sentence that is related to the workshop material. For example:

   "This ecosystem is in danger, but we can save it if we work together."

2. The participants form a large circle and the facilitator starts by whispering the statement to the first participant.
3. This participant whispers the statement to the person next to them and so on throughout the whole group.
4. At the end the last person announces the message they beard and the facilitator writes this up on a board or flip chart. Then the facilitator writes down what the original message was - invariably the message has changed dramatically as it passes from ear to ear.
5. At this stage the facilitator explains that when we want to gather information we must talk directly to the source and not simply rely on information that we have heard by way of rumor or through others.






Facilitator's Tips

- Participants are not allowed to say the message more than once
- The message needs to be whispered so that other participants do not hear
- The trick is to start with a sentence that is not too long

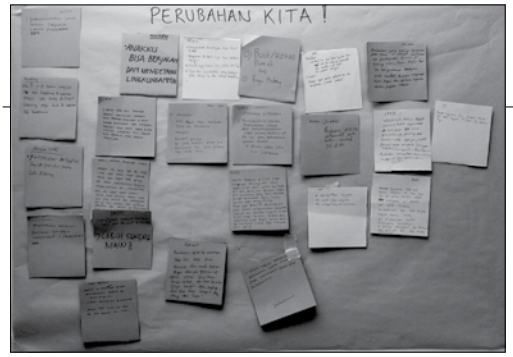
Dynamic Lead-Ins

'Dynamic lead-ins' can help the facilitator to introduce new topics or identify critical issues in a participatory way.

Dynamic lead-ins can provide background information for an upcoming workshop topic and / or reinforce previous knowledge of a topic.

Dynamic Lead-Ins No. 1 - Learning Contract

- Every workshop, and even specific exercises, can be reinforced by starting with a 'Learning Contract'.
- Learning contracts help everyone involved to understand the goals of the activity and to consciously agree that they will work together toward reaching the goals.



Materials Required

- Flip chart
- Markers
- Index cards
- Pens

Time Required

This exercise should take about 15 minutes.

What to do

1. Start the workshop / exercise by stating what the goal of the workshop / exercise is; what the participants will learn; and what they will be able to do after the workshop / exercise.
2. Explain that this is a learning contract between the facilitator and the participants and that it is the facilitator's job to strive to ensure that the contract is fulfilled
3. Write up this contract on poster paper and keep it in a prominent place throughout the workshop. Ask the participants to come forward and sign the contract.
4. Next hand out index cards to each of the participants and ask them to write down their own personal expectations - what they hope to learn from the workshop. The cards can be stuck onto another piece of large paper.
5. At the end of the workshop / exercise the facilitator can return to both the learning contract and the participants' learning expectations and together with the participants check whether both have been fulfilled.

Dynamic Lead-Ins No. 2 - Pre & Post Exercise Quizzes

Give a quiz at the beginning of an exercise. This can help the facilitator pre-evaluate the level of understanding about a specific issue while focusing the participants' attention on the upcoming session. The same quiz can be given again at the end of the session to see change in understanding.

Materials Required

- Flip chart
- Index cards
- Masking tape
- Markers
- Pens

Time Required

This exercise should take about 15 minutes.

What to do

1. The facilitator will need to prepare multiple choice and / or true & false quizzes with about 6-10 questions which relate to an upcoming workshop exercise. They should be written out on large paper big enough for everyone to see.
2. The participants or groups are given a short time to answer the quiz questions.
3. When they are ready, the facilitator can get a show of hands (vote) to indicate how many people choose "a / b / c / d" and / or "true / false" to the questions.
4. The facilitator should keep track of the number of votes given for each possible answer on the board so everyone can see the results.
5. Then the facilitator continues with whatever the exercise is.
6. At the end of the exercise the facilitator can ask the participants if they would like to change any of their answers. This will provide a tangible record of how much they have just learned.

Example 1 : With Creative Thinking Exercise "Various Building Materials"

These building materials are sustainable resources

- Bamboo TRUE • FALSE
- Coconut wood TRUE • FALSE
- Asbestos TRUE • FALSE
- Rainforest wood TRUE • FALSE

Example 2 : "Sustainable farming"

Chemical Pesticides:	**Sustainable farming :**	**Unsustainable farming :**
(a) make people healthy	(a) uses only one kind of crop	(a) uses chemicals
(b) make people unhealthy	(b) uses many different crops	(b) uses natural fertilizers
(c) make soil healthy	(c) uses imported resources	(c) damages the soil
(d) make soil unhealthy	(d) uses local resources	(d) makes soil more healthy

Dynamic Reviews

Dynamic Reviews No. 1 - Ball Toss Review

This is a physically active exercise that can be used at the end of the day or at the end of a session. It is especially useful after a session that involves a lot of technical material or requires heavy concentration as it is also an energizer.

Materials Required

A ball (a soft ball is best)

Time Required

This exercise should take about 15 - 20 minutes.

Dynamic Review No. 1a - "Valuable Lessons Learned" Ball Toss

What to do

1. The facilitator asks the workshop participants to form a circle
2. The facilitator starts by saying what they thought was the most valuable lesson or concept they learned that day, and then throws the ball to another participant.
3. The participant states the most valuable or important lesson / concept they learned that day and throws to another participants and so on until all participants have expressed their valuable lessons/concepts learned.

Dynamic Review No. 1b - "Concepts in Action" Ball Toss

1. The facilitator asks the workshop participants to form a circle
2. The facilitator starts by stating a concept that relates to the workshop / exercise, and then throws the ball to another participant.
3. The participant gives an example of that concept in action, and then states another concept and throws to another participants and so on.

Example:

- The person throwing the ball yells: "Soil improvement"
- The person receiving the ball says: "Using organic compost"
- This person then passes the ball to another participant and yells out a new concept: "Recycling"

Facilitator's Tips

If someone receives the ball but does not have an example ready, they can 'pass' by passing the ball to a different person and simply repeating the question.

Dynamic Review No. 1c - "Process" Ball Toss

1. After an exercise has been conducted about the steps in a particular activity, the facilitator asks the workshop participants to form a circle
2. The facilitator starts by explaining the first step in the process that has been covered in the exercise, and then throws the ball to another participant.
3. The participant explains the next step in the process and then throws to another participants and so on.

Example (making a garden)

- The person throwing the ball yells: "Design the garden"
- The person receiving the ball says: "Make raised garden beds"
- The person receiving the ball says: "Mulch the garden beds"
- The person receiving the ball says: "Plant the seedlings"
- The person receiving the ball says: "Use compost & mulch"
- The person receiving the ball says: "Water in the morning"
- The person receiving the ball says: "Use natural weed & pest control" etc.

Dynamic Reviews No. 2 - Calm Down!

Sometimes a group needs to slow down after an intensive session. This will help everyone to consider more of the benefits of new learning.

Time Required

This exercise should take about 10 minutes.

What to do

1. Invite the participants get into a comfortable position with their eyes closed.
2. Then, have them reflect on what is important about what they have just learned and how it might be helpful to them.
3. After about five minutes, say a key word or phase that relates to the main ideas that have been covered, and ask them to reflect on that for a couple of minutes.
4. Repeat one or two more key words/phrases, leaving a couple of minutes for reflection each time.
5. Then gather the group into a circle and invite them to share what they believe are the most important or valuable aspects of the ideas they have just reflected on, and how they can best use these ideas in their own life.

Facilitator's Tips

This may seem like slack time, but reflection is one of the most powerful learning techniques available. Use it!

Dynamic Reviews No. 3 - "The Game Show"

Materials Required

- Prepare multiple choice questions with A B C or D answers based on the workshop material (about 3-5 questions per group)
- Place a paper sign designating A B C or D in the four corners of the space
- Prepare two seats at the front of the space:
    - **One for the facilitator** (game show host)
    - **One for the participant** (game show contestant) – the "hot seat"

Time Required

This exercise should take about 30 - 45 minutes.

What to do

1. Divide the participants into groups with about the same number of people in each group. Explain that the objective of the game is to be the group that answers the most questions correctly.
2. Explain the rules of the game:
    - Each group has two chances to "**Ask A Friend**" - ask another member of their group if they know the answer to the question.
    - Each group also has two chances to "**Ask The Audience**" - ask all the participants to stand up and walk to the corner of the room with the letter corresponding to the answer they think is correct.
3. Ask the first group to send a representative to the "hot seat". The facilitator asks a question giving four multiple choice answers (A B C D).
    - **If the "contestant" answers the question correctly** they return to their group and another member of the same group comes to the front
    - **If the "contestant" does not answer the question correctly** they return to the group and the facilitator calls for a representative from another group to sit in the "hot seat"
    - **If the "contestant" is not sure of the answer** they can choose to use one of their group's opportunities to either "Ask The Audience" or "Ask A Friend". Remember: Each group is only allowed to use the "Ask The Audience" or "Ask A Friend" twice
4. The facilitator adds up the number of correct answers for each group and announces the winner at the end of the exercise.

Facilitator's Tips

For each group ask a couple of easy questions first then ask progressively more difficult questions.

Brainstorms

"Brainstorming" is a good way to generate creative ideas to solve a problem.

The key results of a brainstorm may be :

- A complete solution to a problem
- A list of ideas for an approach that may lead to a subsequent solution
- A list of ideas resulting in a plan to find a solution

Brainstorms are best done in groups of 3-6 people in sessions that adhere to a number of important rules.

The following "Guidelines for Successful Brainstorming" can be presented and posted in the workshop area to remind the participants each time they do a brainstorm session.

Guidelines for Successful Brainstorming

Brainstorm Rule No 1 : Withhold judgment

All ideas are potentially good - even seemingly foolish ideas can spark off discussion about better ones. Therefore, do not judge the ideas until after the brainstorm is complete - note down all the ideas. **Judging ideas takes up brain power which could better be devoted to creating new ideas.**

Brainstorm Rule No 2 : Encourage "wild" ideas

It's easier to adjust a wild idea than to think of an immediately valid one. Present bizarre ideas to see what they spark off - the 'wilder' the idea the better.

Brainstorm Rule No 3 : Quantity not quality

Go for quantity of ideas and narrow down the list later. Strive to generate as many ideas as possible - the more creative ideas a group has to choose from the better. If the number of ideas at the end of the session is very large, there is a greater chance of finding a really good idea among them. Keep each idea short, do not describe it in detail - just capture its essence. Think fast, reflect later.

Brainstorm Rule No 4 : Build on others ideas

Build and expand on the ideas of others - add extra thoughts to each idea & use other people's ideas as inspiration for your own. Combine several of the suggested ideas to explore new possibilities. **The most creative people are also good listeners.**

Brainstorm Rule No 5 : Every person and idea has equal worth

Every person has a valid and unique perspective on any situation. You can always put forward ideas purely to spark off other people. Participate, even if you need to write your idea on paper. Each idea presented belongs to the group, so it is the group's responsibility to ensure all members feel able to contribute freely and confidently.

Brainstorm No. 1 - The Magic Charm

The "Magic Charm" activity is a good way to encourage and energize both individual and group brainstorming sessions.

Time Required

This activity should take about 30 mins – 1 hour.

What to do

1. Form work groups.
2. The work groups are asked to go outside and together find a small object that attracts their attention or that they think exemplifies a natural pattern (e.g. a branch, pebble, shell, leaf etc.).
3. Once the groups have reassembled in the workshop space the facilitator tells the participants that they have just found a "Magic Charm" that will allow them to **change three things in their world.** They can change anything they want.
4. Ask the workgroups to come up with three ideas of how they would use their "Magic Charms" to change any of the following:
   - Themselves
   - Their work or an important project
   - Their house
   - Their community
   - Their country etc.
5. The groups then share their three wishes with everyone at the workshop.
6. Following this the participants again join up with their brainstorming groups and work together to discuss :
   - Three changes they would make to their community
   - The reasons why these changes are important
7. Each group then shares its three changes with the workshop together with the reasons why these changes are important or needed.

Variation

Have the work groups brainstorm what they would change if they were President for a month.

Facilitator's Tips

Let the workgroups know how much time they have for their group brainstorms before they start, and give a "five minute" warning so they can wrap up their ideas before presenting them to the larger group.

- This activity can be used as a lead-in to the village design exercise at the end of the Permaculture Course.

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WORKSHOP RESOURCES 2

Participant Hand outs

Resources for Permaculture Workshops & Follow up - Participant Handouts

Notes...

About these handouts

These simple handouts have been designed to be easy to photocopy so that they can be duplicated and given to workshop participants and / or interested community members.

They can be used as "take-home" resources and references for related lessons and / or distributed in local communities for raising public awareness about the related issues.

Whenever it is appropriate, please encourage your workshop participants to take this information home and share it with their families and other people in their community. This will help to increase awareness and therefore support for the ongoing application of Permaculture Principles in their area.

More educational media and handouts available for free downloading from the Yayasan IDEP web site at :

- **In Bahasa Indonesia :** www.idepfoundation.org/indonesia/idep_downloads.html
- **In English :** www.idepfoundation.org/idep_downloads.html

Facilitators should also be encouraged to make their own versions of handouts by:

- Copying relevant section of the Permaculture Reference Book
- Downloading other information from the internet and creating handouts
- Designing their own handouts that match the materials delivered & local needs

Please send us your feedback and suggestions about these handouts and other handouts that would be useful for your trainings.

If you design any new ones and would like to share them with other facilitators throughout Indonesia feel free to send copies to IDEP for ongoing consideration for publishing in later editions of these books.

Thank you and best wishes for your trainings and activities!

Please send your feedback, comments and new ideas to: info@idepfoundation.org

Notes...

What is Permaculture?

Permaculture is a design system that works towards harmonious integration of landscape and people to provide food, shelter, energy and other needs in a sustainable way. It takes into account food production, structures, technologies, energy, natural resources, landscape, animal systems, plant systems, and social and economic structures. It is applicable to urban and rural conditions and any scale of design. The 10 basic principles of Permculture design are guidelines that you can apply to any project. They are demonstrated in the image below, can you find them?

Permaculture is about working with, rather than against, nature.

Permaculture is = PERMAnent AgriCULTURE + PERMAnent CULTURE

Permaculture draws upon traditional practices of earth stewardship integrated with appropriate modern technology. The term “Permaculture” was coined in the 70s by Bill Mollison and David Holmgren. Today, Permaculture work is being carried out in over 100 countries by many thousands of permaculture design course graduates.

Permaculture Ethics are
Earth care • People care • Fair share

To see how these ethics are applied, you can use these design principles for Permaculture design (other side of this fact sheet).

For more information about Permaculture see : www.idepfoundation.org

Text by Morag Gamble of SEED International • Translation & Design by Yayasan IDEP • Illustrations by Rappy & Zion

10 Permaculture Principles

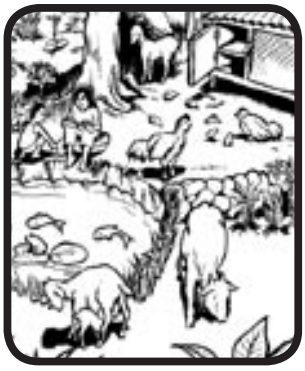
1. The Principle of Diversity - Aims to integrate a variety of beneficial species of food, plants and animals into design. This builds a stable interactive polycultural system which provides for human needs and also for the needs of other species.

2. The Principle of Edge Effect - In general, there is more energy and more diversity of life on the edge where two types of natural systems overlap. On these borders one can access the resources of both sides. Using the edge effect, and other natural patterns that you observe, creates the best effect.

3. The Principle of Energy Planning - Placing the elements of your design in such a way as to minimise the use of energy (including fossil fuels & human labor). Utilizing the energy and resources that you have, first on-site and then from outside the system, as effectively as possible. Onsite energy resources include natural forces such as gravity, windpower, waterpower. This saves time, energy and money.

4. The Principle of Energy Cycling - In a natural system there is no waste or pollution. The output from one natural process becomes the resource for another. Recycle and reuse all of resources as many times as possible.

5. The Principle of Scale - Creating "human-scale" systems. Choose simple, appropriate technologies for use in designs. Only create systems that are managable. Start small and take achievable steps towards an ideal goal.



6. The Principle of Biological Resources - Using natural methods and processes to achieve tasks. Find things in nature (plants, animals, microbes) that are supportive of the system design and minimize outside energy input.

7. The Principle of Multiple Elements - Support each vital need and essential function in more than one way, so that a temporary failure in one element will not stop the functioning of others. Also, recognize that there is almost always more than one way to achieve any task.

8. The Principle of Multiple Functions - Most things can be used in a variety of ways and for a variety of functions. One rule of thumb in Permaculture is to try to design three uses for every element of the system. This can save space, time and complication in any particular project.

9. The Principle of Natural Succession - Work with nature and the processes of natural systems. Anticipate future developments through research and observation when necessary.

10. The Principle of Relative Location - Place every element of your design in relationship to others so that they benefit from each other. For example, store tools near where they will be used.

Text by Morag Gamble of SEED International • Translation & Design by Yayasan IDEP • Illustrations by Rappy & Zion

What do you know about GARBAGE?

THE MOST IMPORTANT THING IS...

Don't Burn Garbage

because the poisons that are in some garbage will be released into the atmosphere, & into the air we breathe which will make us all sick.

Don't Bury Garbage

because the poisons in some garbage seep into the soil around the area where it has been buried, and it gets into the water below the soil. This will make the things that live in the area sick.

Don't Dump Garbage

because the poisions in some garbage will get in the water & soil. Then things & our environment will get sick as more & more poisons are everywhere.

1 .
When you throw away plastic and things that are made from plastic (for example: plastic bags, candy or snack wrappers, styrofoam, sponge packing materials etc) it will take about 200 to 400 years for the plastics to decompose.

2. Burning plastic releases dangerous toxic wastes into the atmosphere and therefore into the air that we breathe. Breathing this pollution has serious negative effects on our health, including, weakening our immune systems & lung cancer.

3. If you throw organic wastes away that are still contained inside plastic bags or plastic containers they will not be able to decompose. So make sure you take your organic wastes out of plastic containers before composting.

I don't want to make myself or others sick, but what can I do with all my garbage? First you need to separate your waste!

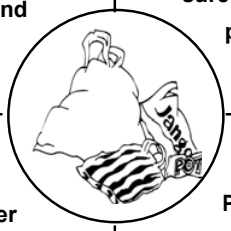
WHY? Because waste can still be used if it is separated into catagories...

Organic Wastes

Organic wastes 'food scraps, leaves etc) can be used to make compost, which is great food for your gardens and pot plants

Other Wastes

Other types of wastes like jars, cans, tires, bottles buckets, etc can be fixed & used in creative ways like these. If they can't then do make sure they get picked up by local pemulung for recycling.



Paper Waste

You can use paper wastes to make your own hand made recycled paper, or to decorate books and for other things. Always remember to use both sides of the paper you write on.

Plastic Waste

Plastics are really bad for our natural environment and our health. They are quite difficult to recycle, so try to reduce your use of platic as much as possible. When you shop use a cloth bag & don't accept any plastics.

For more information, please see : www.idepfoundation.org

Notes...

How do we Take Care of our Wastes?

THE MOST IMPORTANT THING IS

DO NOT...

BURN GARBAGE
the toxins (poisons) that are in some of the garbage will be released in smoke into the atmosphere, and the air that we breathe which will eventually make us all sick.

BURY GARBAGE
the toxins (poisons) in some wastes will seep into the soil around the area where they have been buried, and filter through to the water below the soil. This will damage the things that live in the area.

DUMP GARBAGE
the toxins (poisons) in some garbage will get into the water & soil. Living things & the environment will become sick as more more poisons will run everywhere.

I don't want to make myself or others sick. But what can I do with all my wastes? There are lots of things that you can do to reduce your wastes and recycle what you have.

First : you need to separate wastes...

To do this you will need to have some special bins to put the different types of wastes in.

Why should I separate my garbage ?

ORGANIC WASTES
(food scraps, leaves etc) you can use these to make compost, which is great food for your gardens!

PAPER WASTES
you can use your paper wastes to make beautiful hand made recycled paper, contact Yayasan IDEP for more information!

OTHER WASTES
(old tires, buckets, cans, bottles, etc.) You can reuse in creative ways like shown above, or call up your local recycling program to have them picked up.

REMEMBER !

PLASTIC is one of the types of garbage that is really dangerous for the environment, it is also very difficult to recycle, so try to reduce your use of plastic. When you shop use a cloth bag and don't accept any plastic ones !

Indonesian Development of Education and Permaculture
Sustainable Solutions Living Development

For more information visit :
www.idepfoundation.org

Reduce the negative impacts of waste and its side effects!

we all need to work together...

If everyone can understand about the dangers of toxic waste, reduce how much waste they make and learn how to recycle most of the waste left over, then our planet can be much healthier! Tell your friends and family about these important facts about garbage, and how they can practice good waste management.

A few facts about Garbage and its impacts on us and our living planet...

1. When you throw away plastic and things that are made from plastic it will take about 200 to 400 years for the plastics to decompose!

2. Burning plastic releases dangerous toxic wastes into the atmosphere and therefore into the air that we breathe. Breathing this air has serious negative effects on our health, including, weakening our immune systems and lung cancer.

3. If you throw organic wastes away that are still contained inside plastic bags or plastic containers they will not be able to decompose. So make sure you take your organic wastes out of plastic containers before composting.

Lets do some 'Garbage Math'...

In our small village...

1 family makes about one full plastic bag of garbage each day.

There are about 2,000 families in our village. so how many bags of garbage does our village produce in one day ?

1 BAG PER DAY?

ONE TRUCK HOLDS 200 BAGS

One regular garbage truck can hold about 200 plastic bags of garbage. So, how many trucks of garbage does our village produce in one day ?

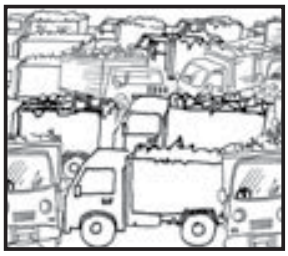
2 TRUCKS PER DAY?

There are 365 days in a year.

So, how many trucks of garbage does our village produce per year ?

3 TRUCKS PER YEAR?

You can fit about 400 trucks in a football field. So, how many football fields of garbage will our village produce in the next 5 years ?



4 FOOTBALL FIELDS IN 5 YEARS?

START THE 3 Rs TODAY...RECYCLING - REUSING - REDUCING

www.idepfoundation.org

WHAT DO YOU CARE ABOUT...

PLASTIC is one of the types of garbage that is really dangerous for the environment, it is also very difficult to recycle, so try to reduce your use of plastic! When you shop use a cloth bag and don't accept any plastic ones!

Did You Know That....

1. When you throw away plastic and things that are made from plastic (for example: plastic bags, candy or snack wrappers, styrofoam, sponge packing materials etc) it will take approximately 200 to 400 years for the plastics to decompose.

2. Burning plastic releases dangerous toxic wastes into the atmosphere and therefore into the air that we breathe. Breathing this pollution can have serious negative effects on our health, including, weakening our immune systems & lung cancer.

3. If you throw organic wastes away that are still contained inside plastic bags or plastic containers they will not be able to decompose. So make sure you take your organic wastes out of plastic containers before composting.

PLASTIC BAGS

DON'T BURN GARBAGE

Because the poisons that are in some garbage will be released into the atmosphere, & into the air we breathe which will make us all sick.

DON'T BURY GARBAGE

because the poisons in some garbage seep into the soil around the area where it has been buried, and it gets into the water below the soil. This will make the things that live in the area sick.

DON'T DUMP GARBAGE

because the poisions in some garbage will get in the water & soil. Then things & our environment willget sick as more & more poisons are everywhere.

Take Action Today for a Better Future !

1. Organize a clean up in your local community or school 2. Learn more about recycling and how you can get involved 3. Take your school on a field trip to the garbage dump and talk about what you see 4. Tell your friends and family about the dangers of plastic for our health and our environment, encourage them to use cloth bags too 5. Hold a cloth bag design competition in your area.

For more information see : www.idepfoundation.org

Notes...

HOW MUCH GARBAGE DO YOU SEE IN YOUR FUTURE?

In our small village 1 family makes about one plastic bag of garbage each day.

There are about 2,000 families in our village, HOW MANY BAGS OF GARBAGE DOES OUR VILLAGE CREATaE PER DAY?

One garbage truck holds about 200 bags of garbage. HOW MANY TRUCKS OF GARBAGE DOES OUR VILLAGE FILL UP PER DAY?

There are 365 days in a year. HOW MANY TRUCKS OF GARBAGE DOES OUR VILLAGE FILL UP PER YEAR?

You can fit about 400 trucks in a football field.

HOW MANY FOOTBALL FIELDS OF GARBAGE WILL OUR VILLAGE MAKE IN THE NEXT 5 YEARS ?

Yikes! That's a lot of garbage, how will we live if everywhere is full of trash!!! Can't someone fix it? What can I do? There are LOTS of things that you can do! And it's only if we all work together and do our part that we will be able to make our world safe and clean again.

FIRST try to make LESS garbage that's called REDUCE. You can do this by using cloth bags instead of getting new plastic ones when you go shopping, refilling your aqua bottle instead of buying a new one, avoid buying things that have a lot of plastic packaging etc.

Next, you can use things over again, that's called REUSE. For example always use both sides of your paper, and use old cans to plant flowers or herbs in, or tin cans as pensil holders, (decorate them so they look cool!).

You can also recycle things. That means changing something that you were going to throw away into something new. For example, you can use waste paper to make new paper, or compost your kitchen wastes which will make your potted plants or garden grow well and give you more healthy plants, cool ya?

What cool ideas do you have about things you can do to start to REUSE • REDUCE • RECYCLE

REMEMBER

DON'T BURN GARBAGE
Because the poisons that are in some garbage will be released into the atmosphere, & into the air we breathe which will make us all sick...

DON'T BURY GARBAGE
because the poisons in some garbage seep into the soil around the area where it has been buried, and it gets into the water below the soil. This will make the things that live in the area sick.

DON'T DUMP GARBAGE
because the poisions in some garbage will get in the water & soil. Then things & our environment will get sick as more & more poisons are everywhere.

SOME THINGS YOU CAN DO TO TAKE ACTION NOW FOR A BETTER FUTURE

(1) Organize a clean up event in your local community or school. (2) Learn more about recycling and how you can get involved (3) Take your school on a field trip to your local garbage dump and talk about what you see. (4) Tell your friends and family about the dangers of plastic for our health & environment & encourage them to use cloth bags too.

For more information see : www.idepfoundation.org

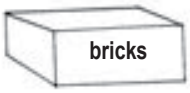
Notes...

Lets Make Recycled Hand Made Paper

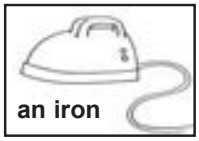
The tools & materials that you will need to make your hand made paper are :


a silk screen frame


waste paper

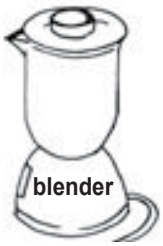

bricks


bucket

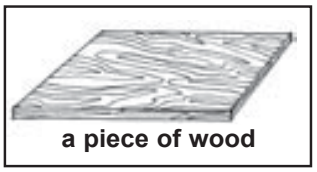

an iron

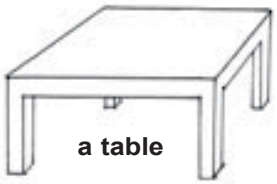

water

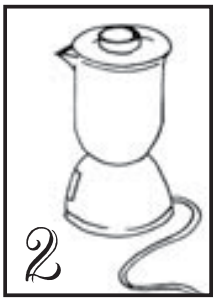

several pieces of cotton cloth & a large piece of sponge


blender

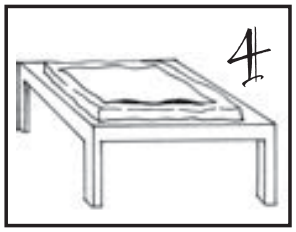

a tub


a piece of wood


a table

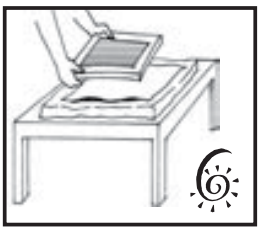


1. Tear paper into small pieces and soak in water for one day.

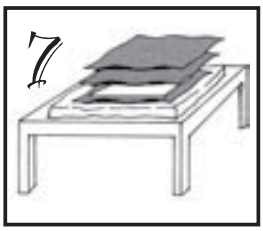


2. Blend the mixture in the blender until it is like porridge.
3. Put your "paper porridge" in the tub with more water.
4. Place the sponge on your table and put a piece of dampened cloth on top.

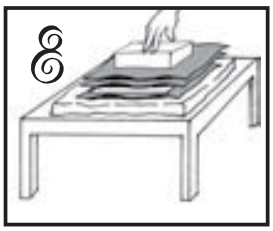
5. Place the screen in the tub and drain off as much water as you can.



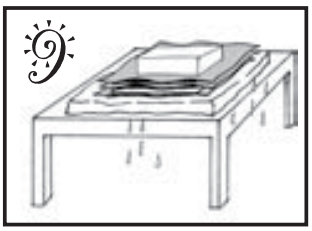
6. Place the mixture onto the cloth by turning the screen over onto the cloth that you have prepared on your table.



7. Place another piece of cloth (that you have moistened) on top of this and repeat process 5 & 6 several times.

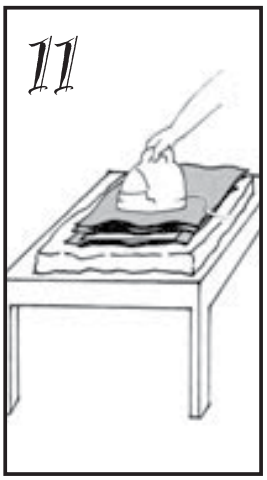


8. After you have made many layers of wet paper & cloth place the piece of wood on top, then the heavy bricks on top of that.



Leave the "press" alone for about 1-2 hours, until the extra water has dripped off, make sure it is really dry.

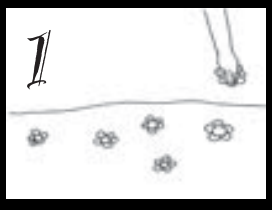
Pick up the cloth-paper layers on by one and hang them in a hot place.



Then iron the paper-cloth layers one by one until they are really dry.

Now you have Ready-To-Use, Hand-Made, Recycled Paper !

If you would like to try something different, here are some Special Techniques...



1. Applique Technique
When you have just placed the porridge onto the cloth, you can put some small flowers, small leaves, or grass, onto the paper before you press it.

2. Mixing Technique
While you are blending the porridge mixture in the blender throw in some natural materials that will add color or texture (see reverse for some ideas).

3. Pressing Technique
Before you start the pressing process, add some big leaves with nice deep textures into the layers.

Here are some ideas of things that you can make with your paper...

- Paper for drawings and craft projects
- Paper to wrap presents, books, jars, etc.
- Cards, invitations, envelopes, folders, etc.

Your hand made paper is also good for covering other crafts that you can make from recyled cardboard...!

- Pencil holders
- Photo frames
- A gift box

Some natural materials you can use to give color to your paper....

If you want to try making paper with some special colors, try adding these liquids into the blender while you are making your "porridge" (you will need to grate / press & sieve the natural materials first) some of these colors are very strong so use rubber gloves for this project.

TUMERIC : when grated & sieved, it depletes Yellow color

DAUN JATI : when grated & sieved, it depletes Red color

DAUN PANDAN WANGI : when grated & sieved, it depletes Green color

GAMBIR : when grated & sieved, it depletes Black color

PACAR CINA : when grated & sieved, it depletes Pink color

NILA : when grated & sieved, it depletes Blue color

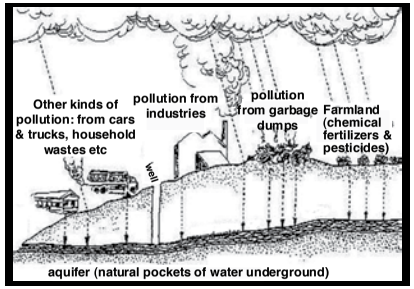
For more information, please visit : www.idepfoundation.org

What do you know about Water?

We use water every day. For cooking, drinking, washing, growing food & making almost everything we use.

Our bodies are made up of more than 80% water!

Clean Fresh Water (water that isn't full of salt like sea water, or polluted like sewage water or waste water) is one of the most precious resources we have. Without fresh water we couldn't live on this planet. Unfortunately there are big problems with fresh water in our world today because of pollution from people and industries. Many of the places that supply us with fresh water (like forests, rivers and lakes) are being lost. And many fresh water sources are now becoming dirty and polluted.



We need to save fresh water! How can we do that?

We can understand how precious our fresh water is and ...

- Don't throw wastes into rivers & oceans
- Don't leave taps on when you aren't using them
- Fix broken taps as soon as they start leaking
- Learn how to collect, store & use rain water
- Figure out how you can reuse water as much as possible

What is Wastewater?

Wastewater is water that has been contaminated by chemicals, from human or animal waste, water that is used in toilets (*blackwater*), or water already used for bathing and washing things (graywater).

What can blackwater do to our environment?
That depends on how you dispose of your blackwater. If you put it into a septic tank and the septic tank isn't properly sealed, then the blackwater will start seeping into the ground, and contaminate your well water or the ground water, which flows below you. If you put blackwater into rivers or the sea it will eventually kill the fish and other sea life around the area, as well as causing human illness for those who come into contact with that water.

What can we do about our blackwater?
Blackwater needs to be treated before it flows back into the environment. Wastewater Gardens® systems, purify blackwater so that it can be safely returned to earth. Doing this will help conserve our precious fresh water resources.

Today, Wastewater Gardens® are purifying and conserving water in many countries all over the world. You can see samples of some of these gardens on our website: www.pcrf.org

WasteWater Gardens® are a great way for us to make our water clean, to reuse water & to help conserve our fresh water resources!

A Wastewater Gardens® Fact Sheet

How you can conserve & clean

Water with Wastewater Gardens®

information about Wastewater Gardens® you can visit :

www.idepfoundation.org/wwg

How do Wastewater Gardens® purify & conserve water?

Wastewater Gardens®

Normally wastewater from your toilets (called blackwater) goes to your septic tank, and disappears into the ground below you. This pollutes your well water and groundwater (the water that flows below the earth's surface). Using rivers or water channels as toilets can be very dangerous for yourself and other bathers, especially children, as there are many diseases and infections that you can catch from this.

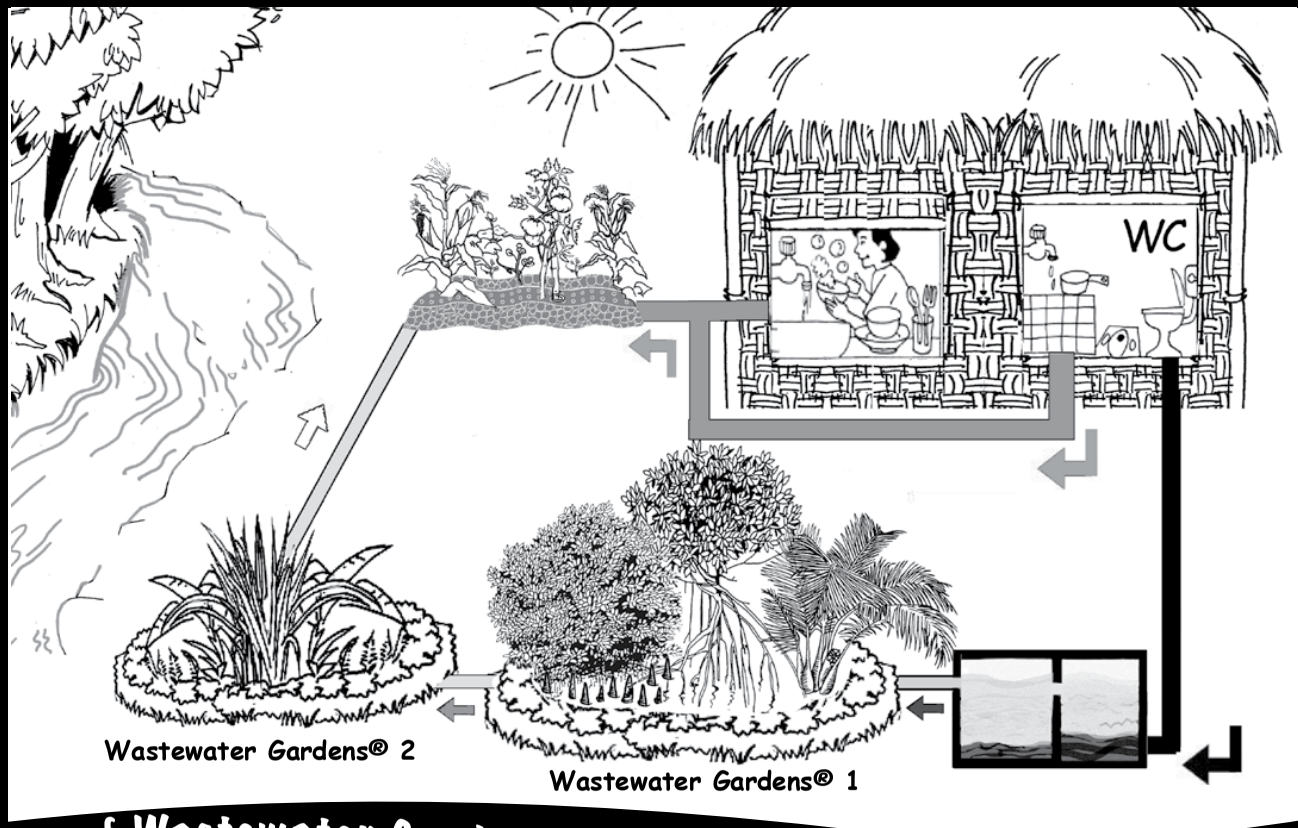
In the Wastewater Gardens® system blackwater flows through a sealed (water tight) septic tank into a Water-tight, plant-filled living water treatment system. The plants use the rich nutrients in the blackwater to grow. At the same time oxygen & microbes that are in the Wastewater Gardens® eliminate harmful bacteria that would cause disease from untreated sewage. **And when water comes out of the Wastewater Gardens® after treatment, the water that flows out of the Wastewater Gardens® is clean enough to water your gardens and farms!**

The wastewater from washing & cleaning (called graywater) can be piped straight from your sinks and is kept below ground, draining through a bed of gravel so there is no danger from contact and can be directly used for irrigating your gardens.

In the system shown here, Wastewater Gardens® 1 uses Mangrove Trees & Shrubs, which can be used for food, medicine & crafts.

&

Wastewater Gardens® 2 uses native wetland plants, water-tolerant fruit trees, such as banana & papaya & medicinal herbs.



Eliminate the risk of diseases that come from contact with blackwater

Are a low-cost, long-lasting appropriate technolgy and easy to maintain

Don't have bad odors

Mosquitoes don't breed in them

Can be made any size; for homes, clinics, schools, hospitals and even communities

Can use either fresh water, salt water or mixed

Save water in dry areas, as water from WWGs can be used for irrigation

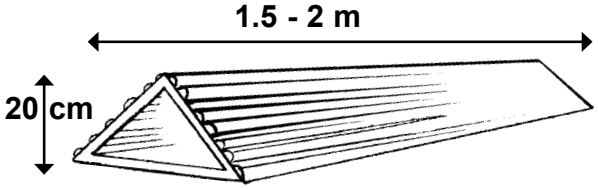
Are beautiful gardens that grow well even in very dry areas

The plants grown in WWGs are often locally availible & are very productive & healthy

to see pictures of Wastewater Gardens® all over the world see : www.idepfoundation.org/wwg

Making Triangle Compost

This is a technique for making compost using an "air tunnel" for extra oxygenation, which speeds up the composting process. To do this you will need a long triangular frame which you can make yourself. The "air tunnel" frame is made from wood or bamboo with the following approximate size : 20cm high and 1.5-2 meters long. Make two of these frames and keep them together.



Keys to Good Composting

1. The carbon / nitrogen ratio

A mixture of dry leaves, sawdust, or other sources of carbon combined with manure, green plants, or fertilizer for nitrogen (approximately 4:1 by volume).

2. The presence of microorganisms

A few shovels full of rich garden soil or compost will supply these.

3. The moisture level

The pile should have the moisture of a well-squeezed sponge. Add water as needed.

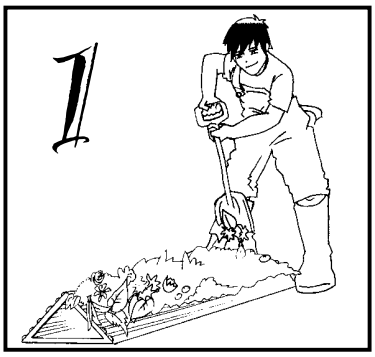
4. The oxygen level

A compost pile should be turned periodically to promote decay of its contents. Turning the pile adds oxygen, so the more you turn it, the faster it breaks down.
(Turning heavy, rotting leaves and grass is vigorous exercise!)

5. The particle size

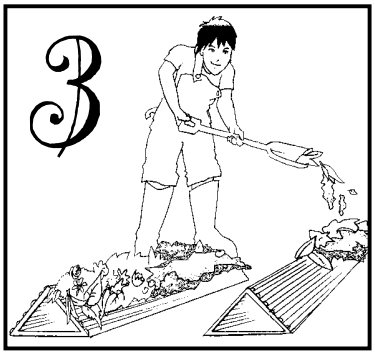
The finer the particle size, the more surface there is for microorganisms to work. Shredding leaves and larger materials generates compost faster.

Using Compost = healthy soil + gardens

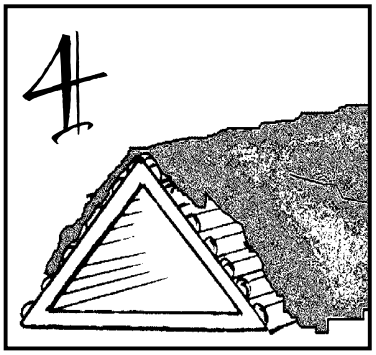


Place carbon & nitrogen materials on top of one of the triangle frames, leave the other one alone.

Each day, add more materials for composting and water the materials so that they stay damp.



Once the materials start to turn black (like soil), move the composting materials onto the other frame that you have made. Put more materials on the first frame again.



Keep the moisture level of the compost even by watering the compost pile regularily. It will take about 6 weeks for your compost to be ready - when it is all black.

Once your compost is made, you can use it in your garden plants. Keep the compost making process going so you always have stock.

The compost that you have made will help your garden, plants and soil to be more healthy and fertile.

Troubleshooting
Composting Problems

The compost pile is only damp and warm in the middle of the pile.

Probable Cause
The compost pile is too small, or cold weather may have slowed composting processes down.

Suggested Solution
If you are only composting in piles, make sure your pile is at least 1 meter high and 1 meter wide. With a composting cage or triangle composting system, the pile doesn't need to be so large.

Nothing is happening. Compost pile doesn't seem to be heating up at all.

Probable Cause
1. Not enough nitrogen material
2. Not enough oxygen getting to compost
3. Not enough moisture in compost pile
4. Compost is finished - ready to use!

Suggested Solution
1. Make sure you have enough nitrogen rich sources like manure, grass clippings or food scraps.
2. Mix up the pile so it can breathe, or switch to compost cage or triangle system.
3. Mix up the pile and water it with the hose so that there is more moisture in the pile - a completely dry pile won't compost.

Matted leaves / clippings aren't decomposing.

Probable Cause
Not enough aeration, and / or lack of moisture.

Suggested Solution
1. Avoid thick layers of only one type of material. Too much of something like leaves, paper or grass clippings won't break down well.
2. Break up the layers and mix up the pile so that there is a good mix of materials.
3. Shred into small pieces any large materials that aren't breaking down well.

The compost smells like rancid butter, vinegar or rotten eggs.

Probable Cause
Not enough oxygen, and / or the compost pile is too wet, or compacted.

Suggested Solution
1. Mix up the pile so that it gets some aeration and can breathe. Or use a compost cage or triangle system.
2. Add coarse dry materials like straw, hay or leaves to soak up excess moisture.
3. If smell is too bad, add dry materials on top and wait until it dries out a bit before you mix the pile.

The compost smells like ammonia.

Probable Cause
Not enough carbon materials in the compost

Suggested Solution
Add more brown carbon materials like sawdust, rice husks, leaves, straw, hay, shredded newspaper, etc.

The compost is attracting rodents, flies, or other animals.

Probable Cause
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This is normal composting, and part of the natural process. It is not a problem.

The compost is attracting Fire Ants

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Pile could be too dry, not hot enough, and / or has kitchen scraps too close to the surface.

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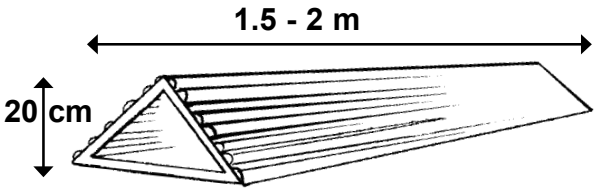

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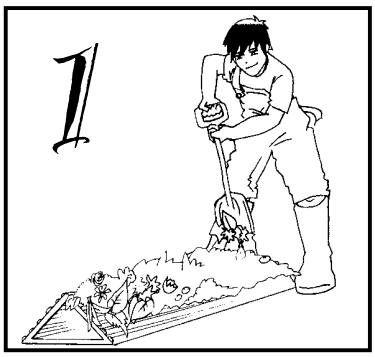

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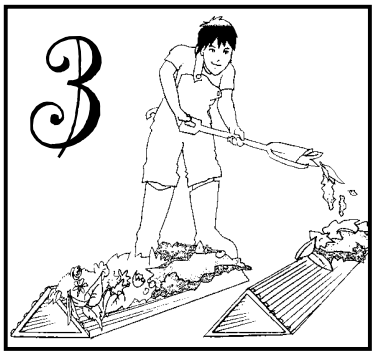

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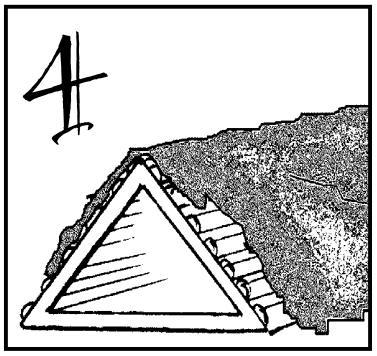

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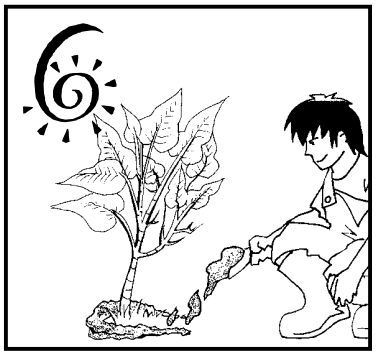

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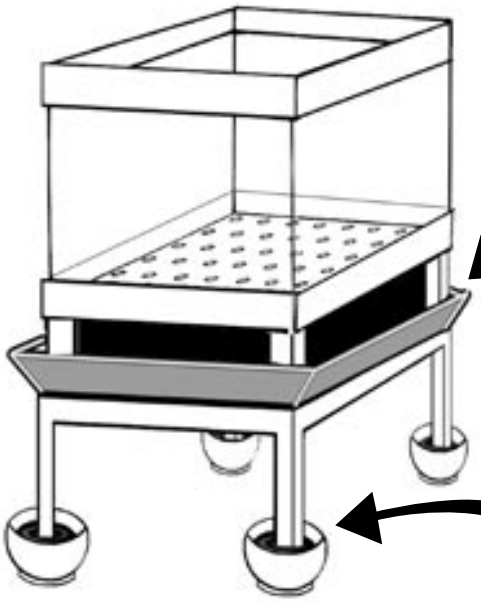
MAKING A WORM FARM

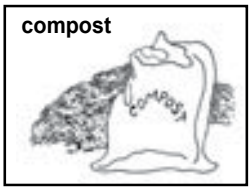
The main box of your worm farm can be made from many materials such as bamboo or more durable plastic or glass. Be sure that the base of the box is perforated so you can collect worm juice (yum!)

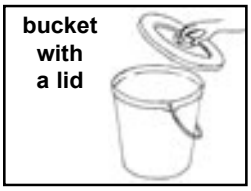


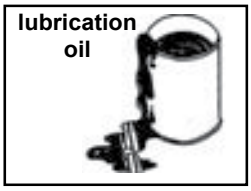
"Worm Juice" is liquid that the worms make, it is great plant food!

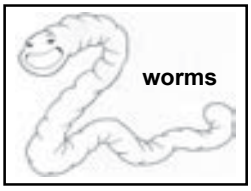
It can be easily collected in a tray placed below the main box of your worm farm. The wetter the worm food, the more worm juice you get.

Important! Make sure that the worm farm legs are placed in lubrication oil or soapy water so that ants won't come in.

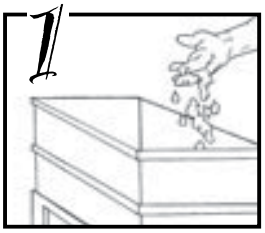






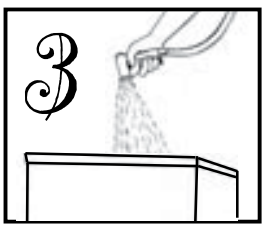


These are the steps in setting up your Worm Farm...

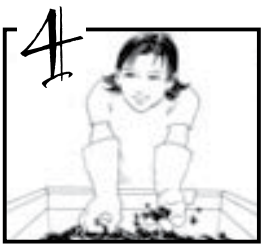


Put about 15cm compost into the box of the farm

Mix kitchen scraps or plant leaves and stems into compost



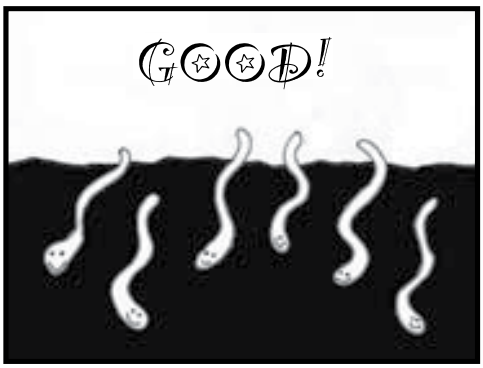
Add water to the top box - just enough to make the compost moist



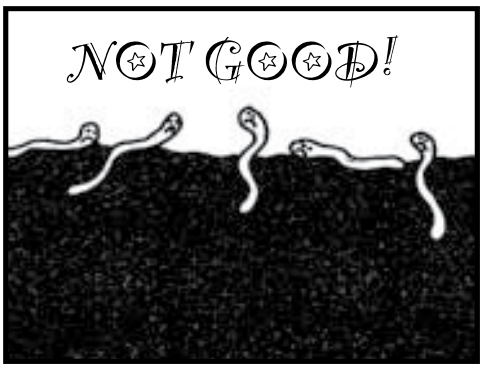
Use gloves (if you want) and mix everything together

Gently add worms (about 1 kg) into the compost mixture in box

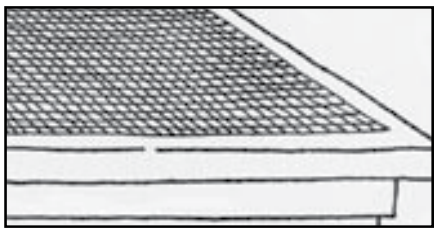
Check if your worms are happy in their new home...



If your worms DISAPPEAR (in other words, go down inside the compost) they like it.



If they stay on, or return to the surface, there's something wrong with your compost mixture



Close lid firmly to keep out Worm Eaters! Lids can be made from chicken wire (if farm is sheltered from rain), rubber, plastic, tin or wood but make sure it is ventilated, so your worms can breathe.

FOR HEALTHY WORMS

Worms are really useful, they take certain types of kitchen scraps and turn them into excellent 'CASTINGS' and 'WORM JUICE' which are great food for your garden. But remember worms are living creatures and need to be well cared for, so pay close attention to them. Make sure you don't feed them anything that makes them sick.

Do not feed your worms :

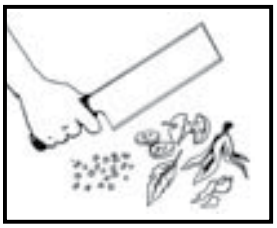
- Coffee or tea
- Oil or oily foods
- Essential oils or anything aromatic (with strong smells)
- Soaps or chemicals
- Bones or meat
- Citrus or other acidic fruits
- Not too much salt or sugar

How much do your worms eat ?

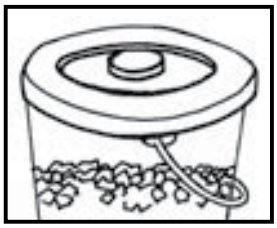
About the same amount of food as their own weight. **1 kg of worms eats 1 kg of food.** You should feed your worms atleast once every 3 days.

HOW TO FEED YOUR WORMS :

Note: If you live in Asia, banana stumps chopped into small pieces are a good alternative to kitchen scraps

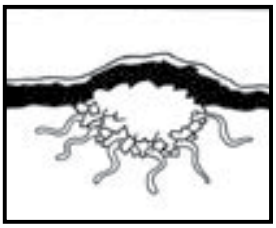


Chop kitchen scraps into small pieces (see list above for foods to avoid)



Store them in a bucket for 2-3 days, add a little water so they ferment easily

Dump fermented scraps into a hole in the worm farm box compost mixture



Cover the scraps with compost (use your hands, not sharp tools)

WORM WARNINGS - Things to Always Check :

Moisture Levels...

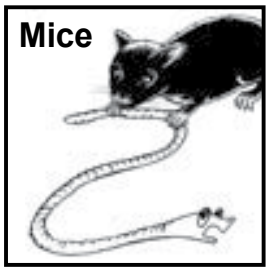
Too Wet

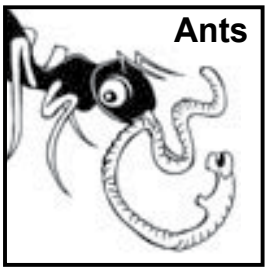
Add and turn compost don't let it become compacted or water logged.

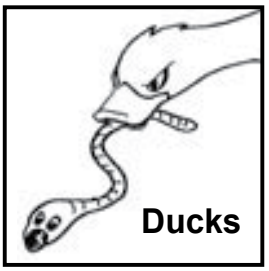
Too Dry

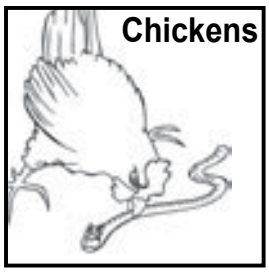
If the compost looks flaky and crumbling, add water from your kitchen scraps.

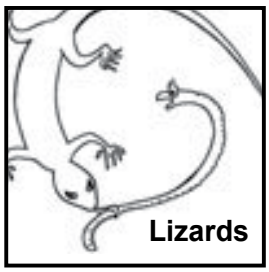
Worm Eaters!

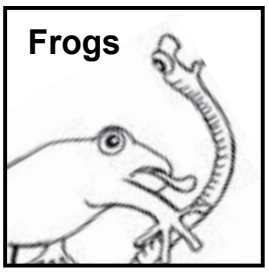












for more info see : www.idepfoundation.org

Wouldn't you rather grow the healthiest, most nutritious varieties of seeds...

For thousands of years farmers have collected and produced their own seeds.

While providing food for their families, gardeners all over the world save seeds from only the healthiest and tastiest varieties.

Working together with the natural processes of the forest, seed savers around the world have created a vast and diverse catalogue of useful and nutritious plant varieties.

...while saving and making money at the same time?

These days large businesses have begun to produce seed to make a profit on the world market.

These businesses have engineered new, chemically dependant seeds by hybridizing and genetic engineering. Worldwide, local varieties of food crops are disappearing as they are replaced by "engineered" varieties. In the last century three-quarters of all garden varieties have disappeared!

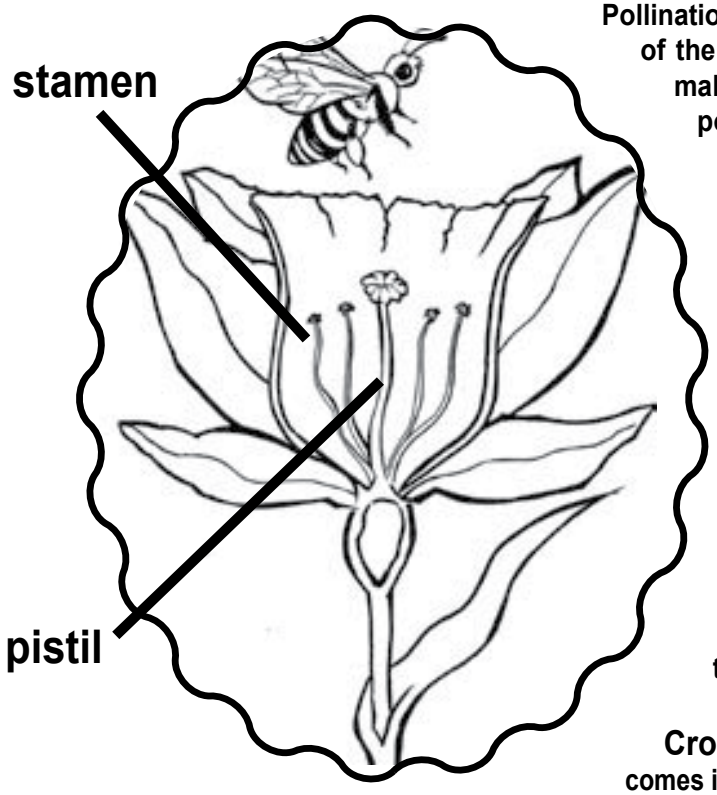
These companies are making huge profits in a business which once belonged to the small farmer while small farms go bankrupt. Why not reclaim it?

Help protect your community's inheritance. Grow and save your local plant varieties!

Many people around the world recognize the need to conserve local and heirloom plant varieties. Start a seed Bank and join the worldwide network of seedsavers TODAY!

Flower Structure & Pollination

First you will need to know a little bit about how plants reproduce...



Pollination happens when pollen from the male parts of the flower (stamen) comes into contact with female parts of the flower (pistil) Once a flower is pollinated it begins to create seed. Depending on the type of plant, pollination can happen in several ways...

Self-pollination - Most vegetable flowers have both male and female parts on the same flower. These species can pollinate themselves.

Insect pollination - For some species, such as squash, insects or birds carry pollen from one flower to another

Wind pollination - Some species, such as corn, allow the wind to spread their pollen to other flowers

Cross-pollination - When pollen from one plant comes into contact with the pistil of another.

- **Dioecious plants** such as asparagus, have male and female parts on different plants
- **Monoecious plants** such as corn, have male & female parts on the same plant, not on the same flower
- **Perfect Flowers** have both male and female parts and are capable of self-pollination

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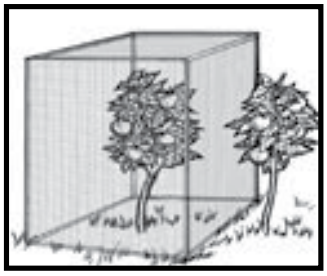
Caring for your plants...

1

In order to conserve a particular variety it is important to isolate flowers from cross-pollination by other varieties. There are several ways to do this. For example you can : Plant different varieties far enough away from each other that pollen cannot travel from one to the other. The distance needed will depend on how that species' pollen travels and any blockades that it might encounter.



CAGING :
Insect pollinated plants can be caged on alternate days to allow insects access to one variety at a time

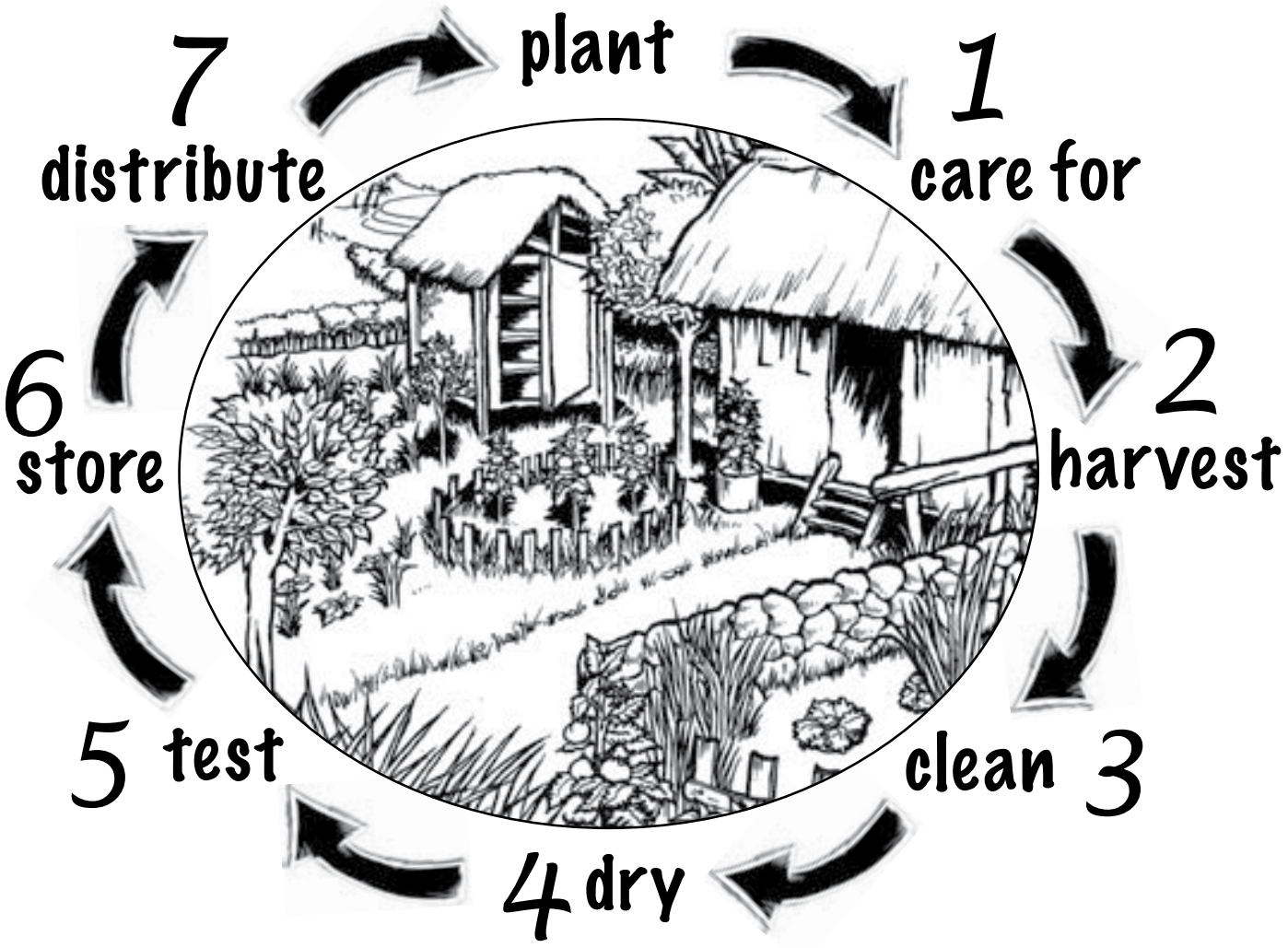
BAGGING :
Flowers of self pollinated plants can be covered with a paper bag or gauze to discourage insects and floating pollen

BLOCKADES :
Place rows of tall, dense plants in between two species to block the movement of pollen between them.

HAND POLLINATION :
Cut the stamen of the male flower & rub it against the stigma of the female.

The Seed Saving Cycle

Seed saving is a continuous cycle of activities that follows the natural cycle of plants. When learning seed-saving, nature is the best teacher.



To make a seed saving project more productive we need a few basic tools. These are the things that you will need to get started...

- Cool, Dry Storage Area •
- Dry Work area •
- Water source •
- Buckets or tightly woven baskets •
- Cloth or paper for drying •
- Air-tight containers •
- Desiccant (Silica Gel, Wood Ash) •
- Sieves or screens for winnowing •
- Notebook & pens for record keeping •
- Labels (Bamboo or re-used plastic) •
- Weather-proof markers for labels •

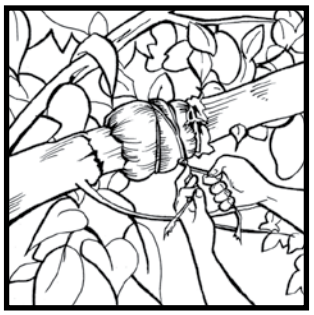
2 Harvesting - four ways to propagate tropical plants

Wet Seed Saving (like tomato...)

Dry Seed Saving (like Padi...)

Grafting (like Mango...)

Rooted cuttings (like Sawo....)



Collecting & 3 Cleaning seeds

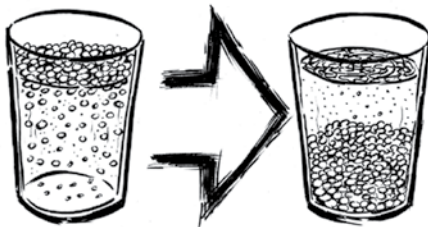
Collect only the best seeds from the best plants!

Rogueing - This is the process of removing plants with undesirable characteristics before they pollinate other plants and spread these characteristics. This should be done often to ensure good seed crops.

The best time for seed collecting is mid-morning...

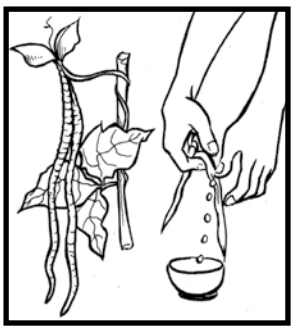
FOR • WET SEEDS

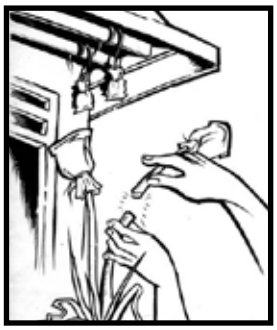
Pick fruit when it is soft & fully ripe (just past eating stage). Scoop seeds out of fruit and onto screen. Run water over seeds to clean them...



Soak in water for 24 hours until fermented

FOR • DRY SEEDS





Hand pick large seeds such as beans. For small seeds such as onions, bag the whole seed cluster and break it off at the stem. Then hang under a roof to dry. Seeds are already bagged for storage. Remember to protect against critters !

Dry Seeds - crush pods in a sack & separate with screen or by winnowing

4 Drying & 5 Testing seeds

DRYING - Spread seeds out on dry cloth or paper. Air dry in shade for one day then move to bright sunlight. Covering with winnowing screens can help guard against wind and pests! Plants like onions can be hung in paper bags under a roof.

TESTING FOR DRYNESS

Big seeds like beans and corn take 1-2 weeks to dry. To test, bite into one. If your teeth leave an indent it is not dry yet

Medium seeds like pumpkin and chili take about 1 week to dry. Dry seeds will snap when bent

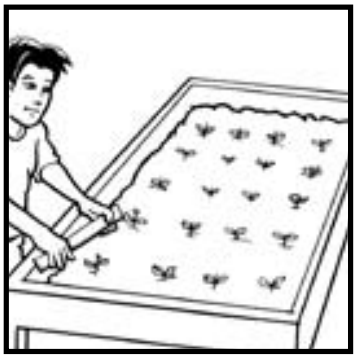
Small seeds like eggplant & lettuce take 2-3 days to dry.

Be very careful to fully dry seed. Moisture will shorten the life span of your seeds drastically!

WARNING ! Some tropical seeds cannot be dried and so must be planted right away!

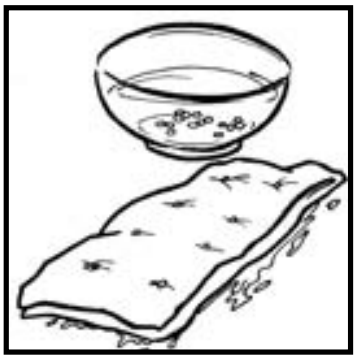
Germination Testing

Test 1 seed for every 10 harvested but no more than 500. Record the number of seeds that germinate & divide by the number that were tested to get a germination percentage. (75/100 = .75 = 75%) Remember to label well!



NURSERY TEST

- Use grated coconut husk as a medium
- Soil can be mixed with coconut if it is sterilized with boiling water
- Water lightly to begin with but keep constantly moist

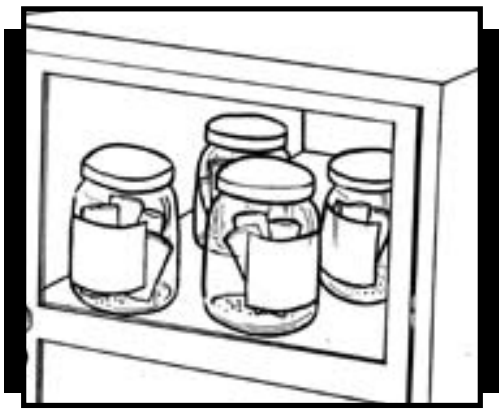


BOWL TEST

For large seeds such as beans or corn

- Soak in water overnight
- Fold seeds in paper & sprinkle with water until damp
- Maintain moisture daily

6 Storing seeds in the tropics



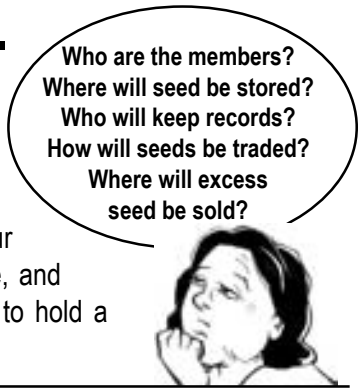
Tropical climates cause seeds to rot quickly but if stored well they can last from 2 - 10 years

- Wrap seeds in paper packets
- Place in an air tight container
- A 2cm layer of wood ash at the bottom of the container will soak up excess moisture
- Add neem powder to ash to discourage pests
- Label everything clearly!

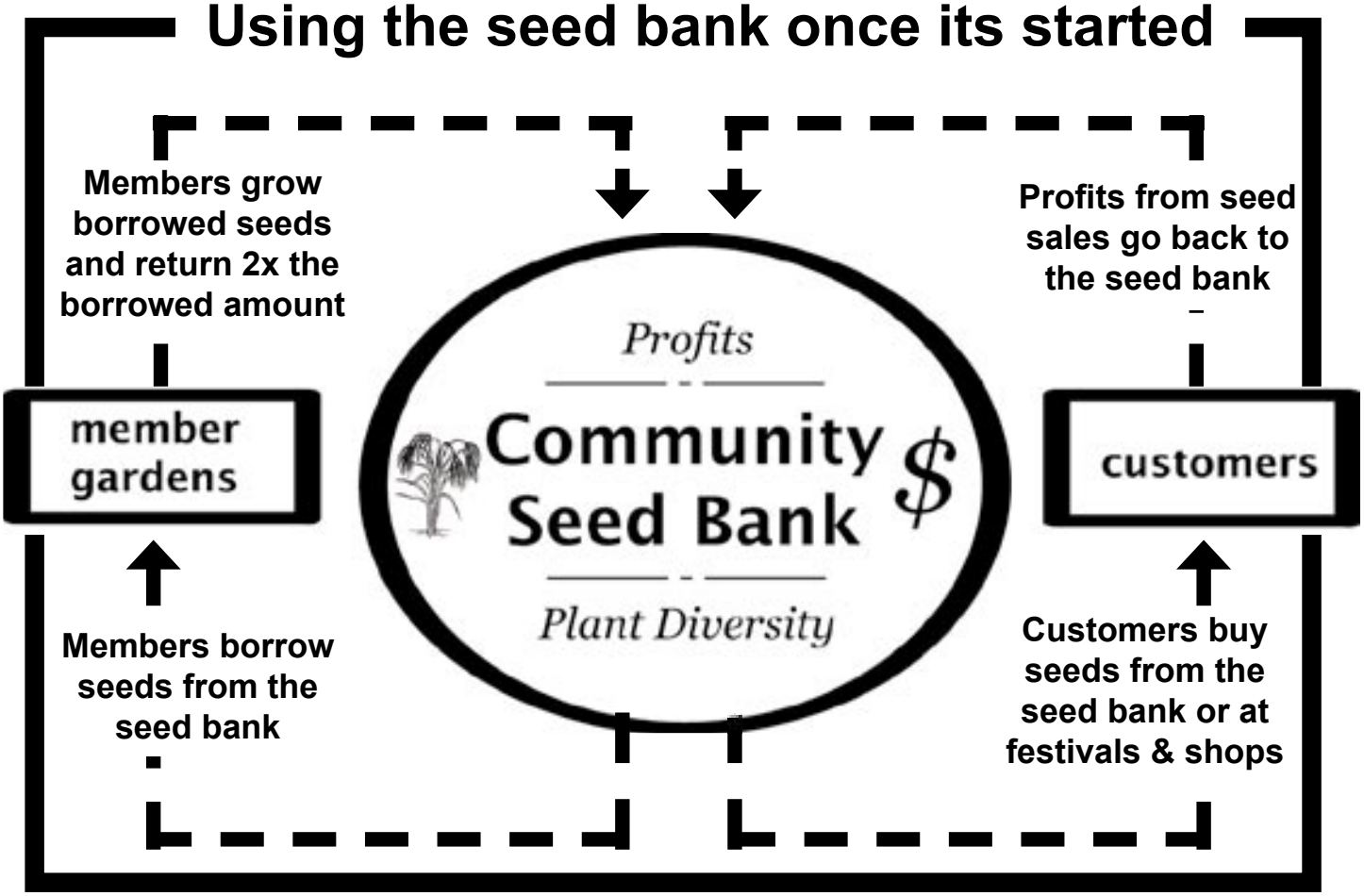
7 How to distribute your seeds?

Community seed banks...

The more seed varieties you have in your seed bank the better! Working together with friends and neighbors is a good way share the workload and the increased profits! Community seed banks connect and organize the knowledge, resources and skills of local farmers. Once your seed bank is started you can even connect to nationwide, and worldwide seed saving networks! The first thing to do is to hold a meeting and make a few decisions...



Using the seed bank once its started



For a successful seedbank you need to keep accurate records

Local Name	Variety	Description / Uses	Time to harvest	Time in nursery	Disease Resistance	Number of seeds		
						germinate	stored	distributed
Bayam	local	Vegetable	4 weeks	direct seed	Grasshoppers	2700/ 3000	500	2200
Papaya	Carica Papaya (Sunrise Solo)	Fruit, Juice, medicine	1 year	3 weeks	Some fungi	850 / 1000	700	150
Papaya	Carica Papaya (Sunset Solo)	Fruit, Juice, medicine	10 months	3 weeks	Some fungi	770/ 1000	170	600
Timun	Local	Vegetable	60 days	direct seed	leaf-spot	1200/ 1500	1000	200

This seed saving fact sheet was developed by Yayasan IDEP - www.idepfoundation.org with support from The Seedsavers Network of Australia- www.seedsavers.net

⑥

Seed Saving Checklist

No halaman :

Name of Seed / Plant	Step	Seeds Received			Drying	Tested in nursery			Planted again for propogating					Catatan
		From where	date	qty	time	qty	time	% grows	location	qty	date	qty grows	% grows	
Local name	A													
	B													
Variety	C													
	D													
Family	E													
	F													
Local name	A													
	B													
Variety	C													
	D													
Family	E													
	F													
Local name	A													
	B													
Variety	C													
	D													
Family	E													
	F													
Local name	A													
	B													
Variety	C													
	D													
Family	E													
	F													

Notes...

WHAT ARE G.M.O. ?

BIOTECHNOLOGY : GENETIC ENGINEERING & GENETICALY MODIFIED ORGANISMS

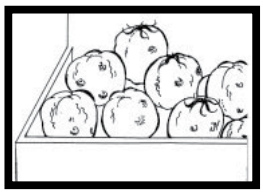
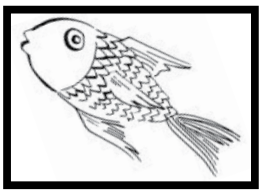
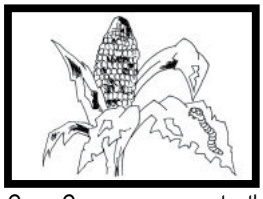
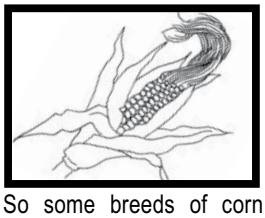
: A BRIEF DESCRIPTION OF WHAT GMOS ARE :

BIOTECHNOLOGY : using plants, animals or microbes, either wholly or in part, to make or modify a product or change an existing species.

GENETIC ENGINEERING (GE) : A modern biotechnological process in which the traits or characteristics of an organism are changed by transferring individual genes from one species to another or modifying genes within a species. **OTHER NAMES FOR THE SAME THING ARE GENETICALLY MODIFIED (GM), GENETICALLY MODIFIED ORGANISM (GMO) OR TRANSGENIC.**

GMO PRODUCTS INCLUDE: Medicines (diagnostic tools & drugs such as insulin), Plants (insect, disease & herbicide resistant plants), Enzymes for food production (cheese), Fuels & Solvents (ethanol).

THIS SERIES OF ARTICLES & FACT SHEETS BY IDEP WILL DEAL ONLY WITH GMO CROP RELATED ISSUES

BEFORE GMO	THE GMO PROCESS			WHAT YOU GET
		+		
Tomatoes unable to withstand refrigeration without becoming bruised and unsellable.	So tomatoes were genetically modified with genes taken from....		A special breed of arctic fish (fish that live in the very cold arctic waters) and a virus.	The new GMO tomatoes could withstand the cool temperatures much longer.
		+		
Corn Crops were constantly being attacked by insects (pests)	So some breeds of corn were genetically modified with genes from....		A special kind of bacteria that kills specific pests when they eat it, and a virus.	The new GMO corn directly emits its own pesticide into the environment.
		+		
Soy Crops threatened by various types of weeds were damaged by herbicides.	So soy was genetically modified with genes that were taken from....		A special kind of bacteria that makes it resistant to specific herbicides, and a virus.	The new GMO soy crops could now be sprayed with these special herbicides.

: THE BASIC PRINCIPLES OF HOW GMOS ARE MADE :

GMOs are made by using molecular biology techniques that permit scientists to identify specific genes, make copies of them, and introduce the gene copies into recipient organisms by using a tool (the most common is a soil bacteria called Agrobacterium) that inserts genes into plants. When the recipient plant's cells divide, the new DNA from the other organism (carried by the Agrobacterium) is copied and passed on to the new cells. These new genes can affect the plant's offspring by what it can do and even how it looks. There are also some other methods used, such as using the "Gene Gun", or bombardment method.

DO YOU WANT A GENETICALLY MODIFIED FUTURE?

FS.GMO#001.eng.What are GMO - FOR MORE INFORMATION CONTACT : GMOindo@dps.centrin.net.id

LET'S LOOK AT GMO & THE POSSIBLE RISKS

GMO & ENVIRONMENT

- Genetic pollution
- Negative effects on soil ecology
- Super weeds
- Super pests
- New and more dangerous plant viruses
- Impact on non-target insects & animals
- Loss of Biodiversity
- Negative effects on forest ecology

GMO & AGRICULTURE

- Lower yields
- Higher input costs
- Increased use of agrochemicals
- Patent contracts
- Loss of local varieties
- Promoting unsustainable monoculture crops
- Loss of Bt (Bacillus thuringiensis) sprays for Organic farmers
- Not enough land to prevent pest resistance

GMO & ECONOMY

- Considered potentially unsafe, some countries are already regulating & refusing GMO products, therefore closing down potential export markets for GMO
- GMO-free products could get a better price on international markets.
- GMO company are monopolising the food production system
- Changing the international market for edible oil products.

GMO & CONSUMERS

- Toxins & Poisons
- Increased Cancer Risks
- Food Allergies
- Damage to Food Quality & Nutrition
- Antibiotic Resistance
- Increased Pesticide Residues

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:
Biotechnology, GE & GMO – IDEP Article
GMO and Farmer Issues - IDEP Article
GMO and Environmental Issues – IDEP Article
Agriculture Biotechnology, The GMO Debate College of Agriculture & Life Science, Cornell University
http://www.purefood.org

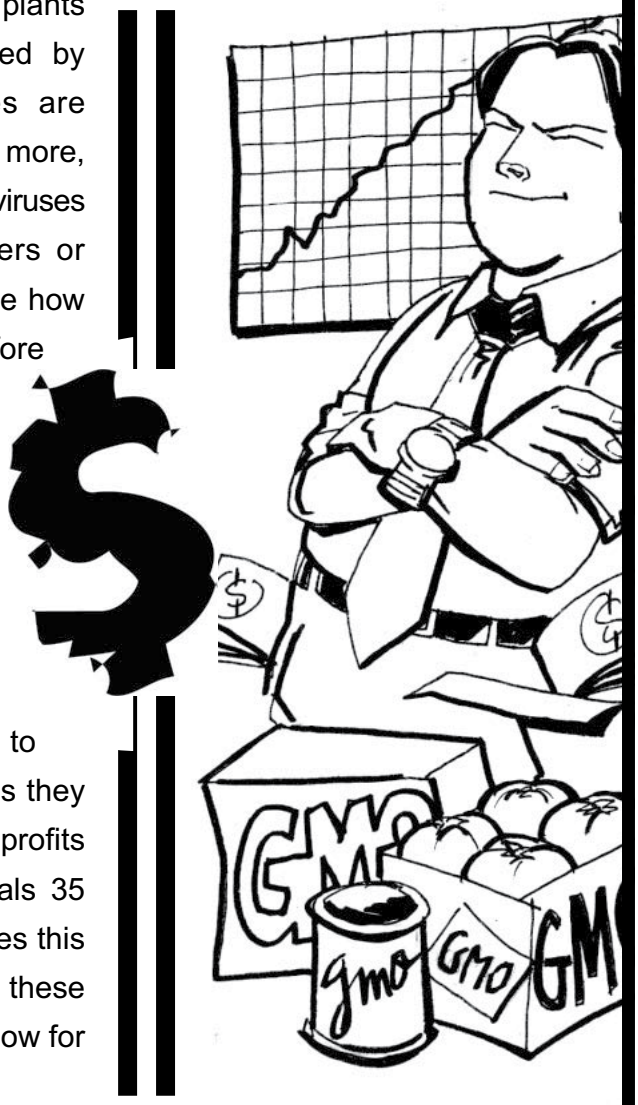
For more details, see fact sheets #006, 007, and 011

GRAPHICS & EDITING BY:
YAYASAN IDEP

www.idepfoundation.org

G.M.O. WHO'S PROFITTING?

GMO (Genetically Modified Organisms) Crops are plants grown from seeds that have been genetically altered by foreign multinational companies. These companies are promoting GMO seeds by saying that THEY produce more, better quality produce, can resist herbicides, insect pests, viruses or can have some other beneficial aspect for farmers or consumers who use them. If this were true you can see how we could become dependant on these seeds and therefore the food they produce. The problem is these GMO seeds and products have numerous potential side effects and until now these products have not been sufficiently tested for human health or environmental effects before being commercially available. The companies that are producing the GMO seeds are the same companies that profited greatly from the Green Revolution, by causing farmers around the world to become dependant on their products. The ironic thing is they are using the same slogans of food security and farmer profits to sell these seeds as they did for their agro-chemicals 35 years ago that were proved untrue. For these companies this is business and the sales and the profits they make from these seeds and the agro-chemicals are large. Please see below for more details...



TOP 6 AGROCHEMICAL COMPANYS' SALES IN 2000 :

See sales forecasts on back .

	AGRO-CHEMICALS	GMO
NO 1 - SYNGENTA	$ 5,888,000,000	$ 958,000,000
NO 2 - MONSANTO	$ 3,605,000,000	$ 1,608,000,000
NO 3 - DUPONT	$ 2,027,000,000	$ 1,838,000,000
NO 4 - AVENTIS	$ 3,480,000,000	$ 247,000,000
NO 5 - B.A.S.F.	$ 3,336,000,000	
NO 6 - DOW CHEMICAL CO	$ 2,086,000,000	$ 185,000,000

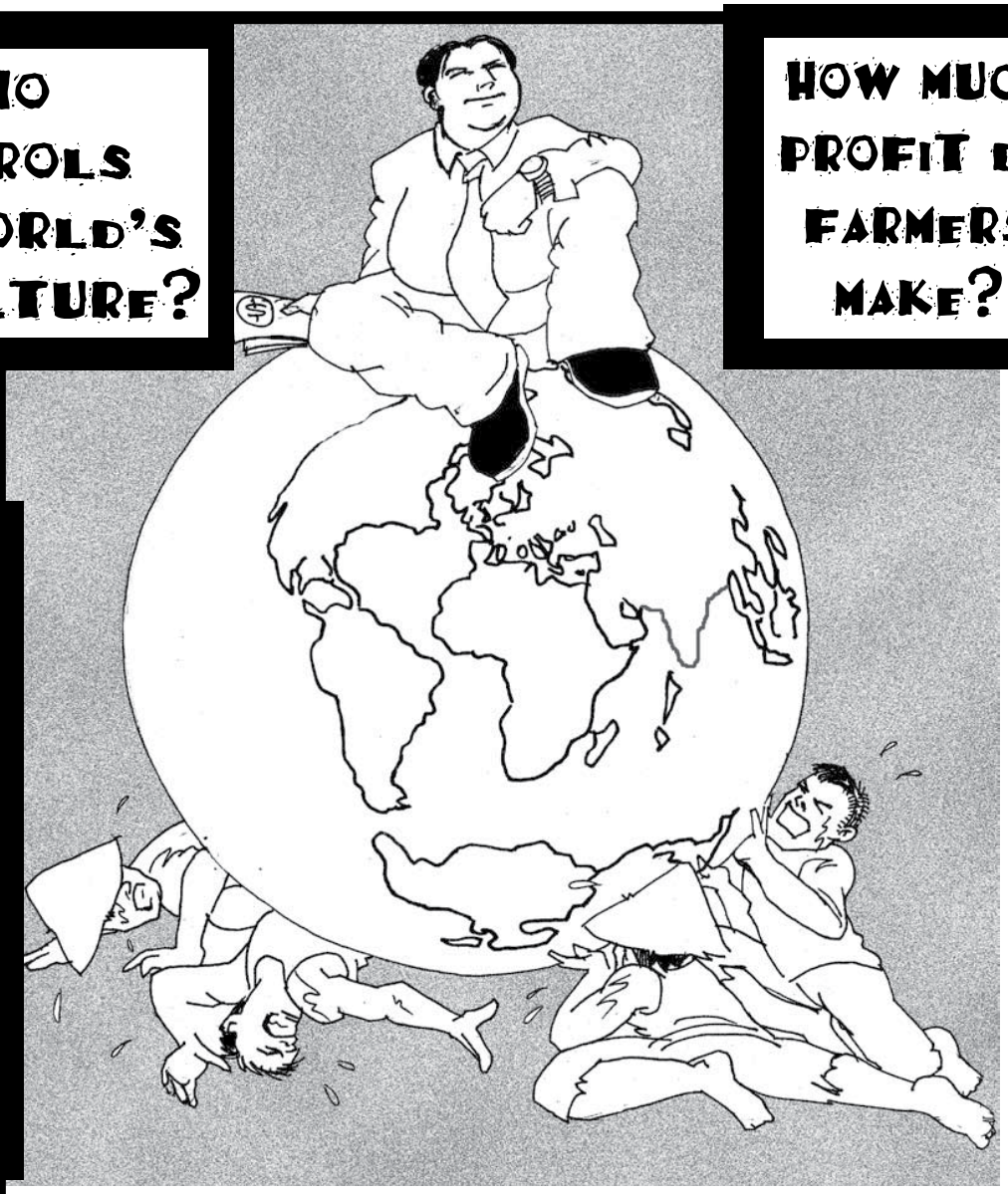
DO YOU WANT A GENETICALLY MODIFIED FUTURE?

FS.GMO#003.eng.GMO who's profit - FOR MORE INFORMATION CONTACT : GMOindo@dps.centrin.net.id

OTHER QUESTIONS WORTH CONSIDERING!

WHO CONTROLS THE WORLD'S AGRICULTURE?

HOW MUCH PROFIT DO FARMERS MAKE?



? WHO IS GETTING THE MOST BENEFIT ?

MARKET FORECASTS...

Insecticide sales expected to increase : 0.6% / year

Fungicide sales expected to increase : 1.0% / year

GMO sales expected to increase : 13.8% / year

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:

GMO and Farmer – IDEP Article

http://www.soyatech.com/bluebook/news/viewarticle.ldml?article=20010920-6

20 September 2001

GRAPHICS & EDITING BY:
YAYASAN IDEP

www.idepfoundation.org

Jln Saleh Abud No 18-19, Otto Iskandardinata Tel. +62 (21) 819 9749 Fax. +62 (21) 850 0052 binadesa@indo.net.id

WANTED! G.M.O. IN INDONESIA

GMO RESEARCH IN INDONESIA

There are already many GMO crops being field tested and researched in Indonesia. Most of the research and trials are being undertaken without the general public knowing. Even people close to the trial site who could be affected are not aware that these trials are taking place.

The reason these crop trials are of concern is that there is the POTENTIAL FOR GENETIC CONTAMINATION from GMO crops to FARMERS' CROPS, with GMO genes modified with bacteria or viruses depending on the type of GMO trial that is taking place.

SOME GMO CROPS
PRESENTLY BEING FIELD TESTED

CORN
Insect or Herbicide Resistant
MONSANTO, PIONEER BALITBIO, ABSP

COTTON
Insect or Herbicide Resistant
MONSANTO

PEANUT
Virus Resistant
BALITBIO, ACIAR

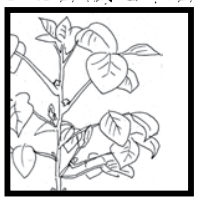
SOYBEAN
Herbicide Resistant
MONSANTO

POTATO
Insect Resistant
BALITAN, BALAI, USA

RICE
Insect Resistant
P3B LIPI

GMO CROPS
PRESENTLY BEING RESEARCHED

COCOA
Insect Resistant
UPBP

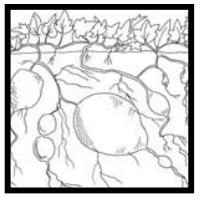


SOYBEAN
Insect Resistant
BALITBIO

PAPAYA
Virus Resistant
BALITBIO, BALITAS & BALITBU

SUGAR CANE
Insect Resistant
P3GI

TOBACCO
Virus Resistant
BALITAS



SWEET POTATO
Insect or Virus Resistant
BALITBIO & MONSANTO

CHILLI PEPPER
Virus Resistant
IPB

COFFEE
Disease Resistant
UPBP

TIMBER TREES
Insect Resistant
INDAH KIAT

THE BIG QUESTION IS : SO WHERE ARE THEY? NO ONE SEEMS TO KNOW

SHOULDN'T WE KNOW WHERE THESE TESTING SITES ARE ?

! CASE !

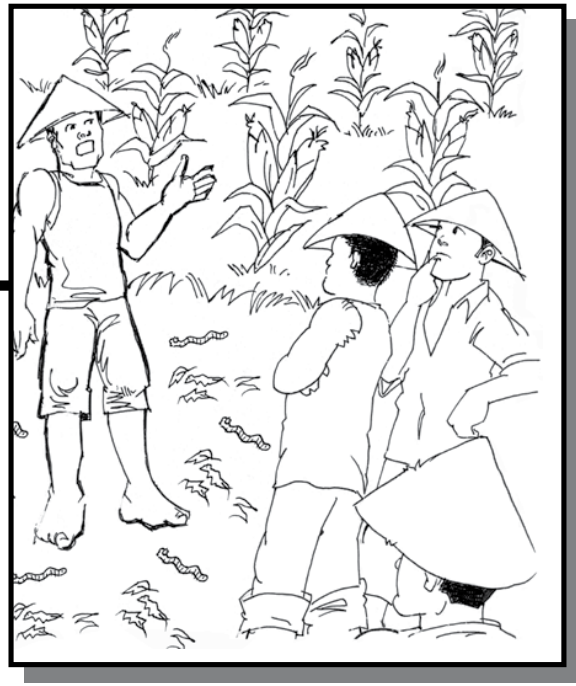
On March 15th, 2001, 40 tons of GM cotton seeds arrived in Makasar (South Sulawesi) from South Africa. They were imported by PT Monagro Kimia, the Indonesian subsidiary of US-based agro-chemical giant, Monsanto.

Local NGO activists tried to block the trucks from leaving the airport because the seed should have been quarantined for detailed examination before distribution. They accused the company of attempting to disguise what they were doing by using trucks marked "rice delivery". The NGOs also protested against the use of the Indonesian military to guard the trucks.

HOW COULD CONTAMINATION AFFECT YOU ?

Loss of local varieties - GMO crops are not sufficiently tested for environmental or human health issues. If after more testing is done there are problems with GMO crops, it will be too late, because the local varieties will have the GMO genes in them and they could have the same problems as the GMO crops.

Loss of markets – export and organic markets are not interested in receiving GMO crops so GMO contamination of your crops will prohibit you from accessing these markets.



WOULD YOU DO GMO TRIALS ON YOUR LAND ?

There is a whole range of potential environmental & human health risks associated with GMO crops and GMO food. Aside from that is the potential contamination of your neighbour's crops if you use GMO.

TO PROTECT YOURSELF & EVERYONE IN YOUR AREA AGAINST CONTAMINATION

- Make sure that you are planting local seeds
- Tell your neighbours about the potential risks of planting GMO crops so they will want to do the same
- Work together with others in your area to find out if GMO crop trials are happening in your area.

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP

RESOURCES:

www.isaaa.org
Herman (2000), Mulyoprawiro, 2000, Slamet-Loedin,2000
"Down to Earth" 49, May 2001

GRAPHICS & EDITING BY:
YAYASAN IDEP

www.idepfoundation.org

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G.M.O. Consumer Issues...

GMO Foods = Foods that are made from GMO crops

What kind of foods contain GMO ingredients?

In the US, there are indications that 60-75% of all non-organic supermarket foods "test positive" for GMO ingredients. In general, fresh food or processed food products containing soybeans, corn or canola, are products that MAY contain GMO ingredients. Other possible items include papaya, tomatoes, potatoes, squash & sugar beets.

In Indonesia, these products were tested & found to contain GMO ingredients: Isomil Soy Infant Formula, Indofood Soysauce, ABC Soysauce, Bango Soysauce, Pringles Potato Chips, & Simba Corn Flakes.

Possible Risks of consuming GMO foods...

Toxins & Poisons

Genetically engineered products clearly have the potential to be toxic and a threat to human health.In 1989 a GMO brand of a dietary supplement, killed 37 Americans and injured more than 5,000 others who already had a pre-existing illness before taking the supplement. Also, In 1999, Dr. Arpad Pusztai's research found that GMO potatoes, spliced with DNA from the snowdrop plant and the Cauliflower Mosaic Virus, a commonly used viral promoter in making GMO plants, are poisonous to mammals.

Cancer Risks

In the US Monsanto is selling GMO recombinant Bovine Growth Hormone (rBGH), which is injected into dairy cows so they produce more milk. The milk & dairy products of injected cows could pose the possibility of human breast, prostate, and colon cancer. A number of studies have shown that humans with elevated levels of a by-product of this hormone in their bodies are much more likely to get cancer.

Food Allergies

Eating foreign proteins spliced into GMO food products may harm people with food allergies. Stringent pre-market safety testing is necessary to protect public health. Mandatory labelling is also necessary so that those suffering from food allergies can avoid GMO foods and public health officials can trace allergens back to their source if GMO food allergies occur.

See Backside for other possible risks...

Do you want a Genetically Modified future?

FS.GMO#006.eng.GMO consumer issues - For More Information Contact : GMOindo@dps.centrin.net.id

OTHER CONCERNS WORTH CONSIDERING!

FOOD QUALITY

Concentrations of beneficial compounds thought to protect against heart disease and cancer were lower in genetically modified soybeans than in traditional strains. These and other studies, including Dr. Pusztai's, indicate that genetically engineering food is likely to result in foods lower in quality & nutrition.

ANTIBIOTIC RESISTANCE

When GMO's are made; they often link it to another gene, called an antibiotic resistance marker gene that helps determine if the genes were successfully spliced into the host organism. Some researchers warn that these genes might unexpectedly recombine with disease-causing bacteria or microbes in the environment or in the guts of animals or people who eat GMO food which, could contribute to the public health danger of antibiotic resistance. If infections cannot be cured with traditional antibiotics, this will lead to development of even stronger cures for infections.

PESTICIDE RESIDUES

The leaders in biotechnology are the same giant chemical companies that sell toxic pesticides. These companies are genetically engineering plants to be resistant to herbicides that they manufacture so they can sell more herbicides to farmers who, in turn, apply stronger herbicides to crops to kill weeds.

SO WHAT CAN YOU DO ABOUT IT ???

AS THE ANTI-GMO CAMPAIGNS IN EUROPE HAVE SHOWN, MASS GRASSROOTS ACTION IS KEY TO STOPPING GMO AND MOVING AGRICULTURE IN A SUSTAINABLE DIRECTION...

#1 Keep informed on GMO issues by visiting the websites listed below & working with local NGO's.

#2 In cities ask your grocery store manager for a written statement on their policy regarding GMO foods. Request that they identify which food products are GMO & which are not, and then label them as GMOor GMO free.

#3 Buy your foods from farmers you know & trust are not using GMO crops

#4 Organize public education forums, & news-making events in your local community about GMO Crops & Food

#5 **Communicate with your elected public officials, political candidates & regulatory agencies. Ask them to...**

- Ban GMO products.
- Enforce labelling of all GMO food & fibre products
- Enforce strict pre-market safety testing of all GMO products
- Enforce GMO corporations & labs to be liable and subscribe to long-term liability insurance.

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:

http://www.greenpeaceusa.org/ge/

http://www.purefood.org

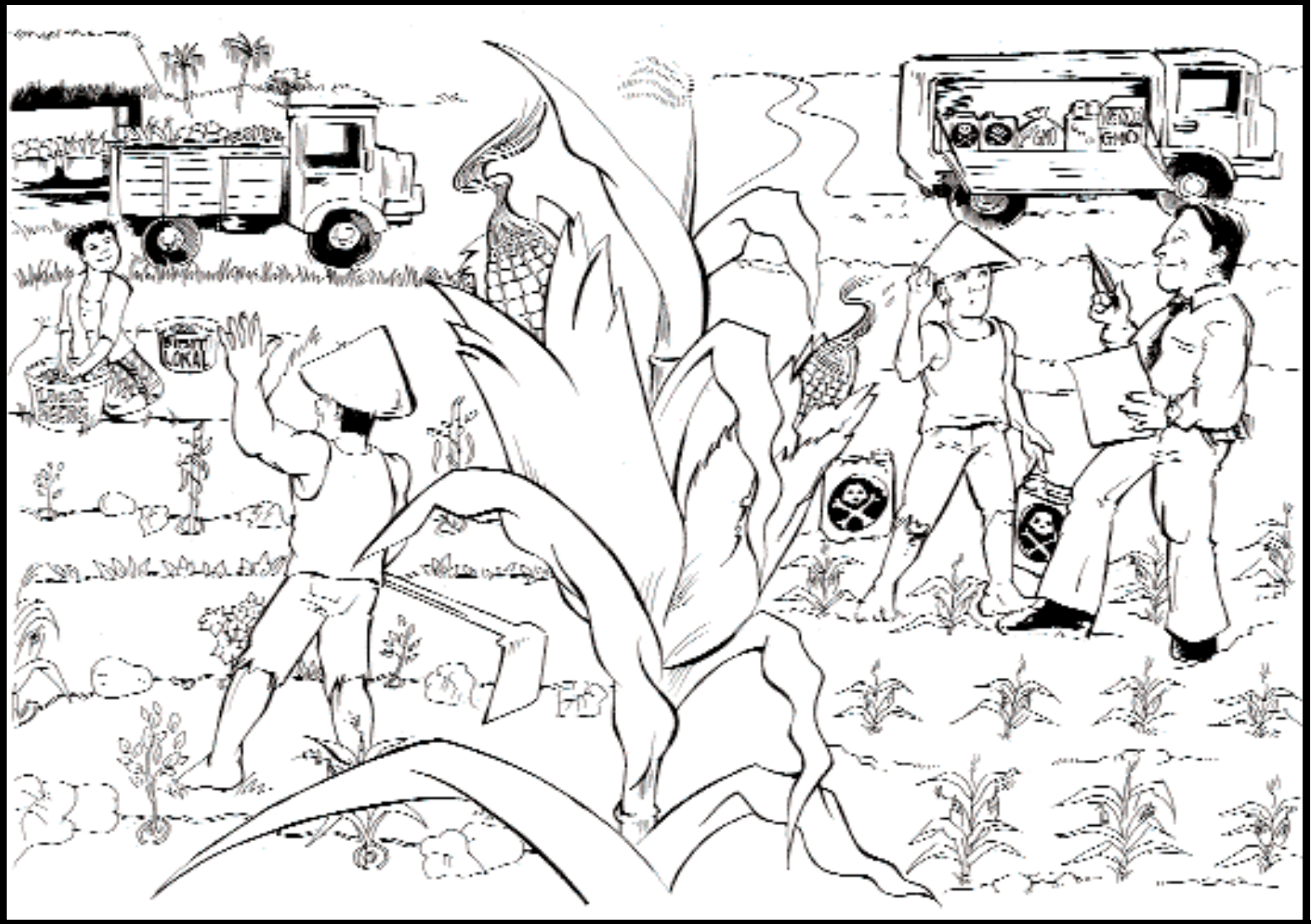
Ditemukan, Produk Makanan Mengandung Bahan Transgenik, Kompas 8, Februari 2002.

GRAPHICS & EDITING BY: YAYASAN IDEP

www.idepfoundation.org

G.M.O. & FARMERS

WHEN YOU ARE CONSIDERING YOUR FARMING OPTIONS...



CONSIDER THIS:

#1 LOWER YIELDS
Studies show that GMO crops can actually get lower yields.

#2 HIGHER INPUT COSTS
GMO seeds cost a lot more money and require other inputs as well.

#3 INCREASE AGROCHEMICALS USE
Studies show agrochemical use can increase when growing GMO crops.

#4 PATENT CONTRACTS
GMO companies make you sign a contract controlling your options.

#5 LOSS OF LOCAL VARIETIES
As with hybrids, wide scale use of GMO seeds can cause the loss of local varieties & reducing biodiversity.

#6 UNSUSTAINABLE MONOCULTURE
Growing GMO crops promotes unsustainable monoculture.

#7 LOSS OF ORGANIC BT SPRAYS
In the world organic farmers use non-toxic Bt (Bacillus thuringiensis) sprays.

#8 COMPLICATED MANAGEMENT
With GMO crops you need to use complicated resistance management strategies.

(SEE BACKSIDE FOR MORE DETAILS)

DO YOU WANT A GENETICALLY MODIFIED FUTURE? DOES YOUR FARM?

FS.GMO#007.eng.GMO & farmers - FOR MORE INFORMATION CONTACT : GMOindo@dps.centrin.net.id

SOME OF THE POSSIBLE EFFECTS THAT GMO CROPS CAN HAVE FOR FARMERS

#1 LOWER YIELDS

There are documented studies that show that yields of GMO crops are not what was promised by the companies and certain crop yields are actually lower than conventional varieties.

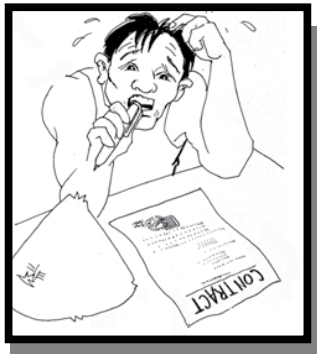
#2 HIGHER INPUT COSTS

The cost of GMO seeds is much higher than hybrid seeds and local seeds. Also, there is often the requirement to purchase additional pesticides & fertilizers in a package deal system.

#3 INCREASED AGROCHEMICALS

The major form of GMO crops (herbicide tolerant) are designed so that farmers will spray more herbicides on their crops. There are also cases where insect resistant GMO crops (Bt. Crops) actually have higher insecticide use.

#4 PATENT CONTRACTS



Farmers using GMO seeds around the world are required to sign contracts aimed at protecting the company's patents on the GMO seeds and also forcing the use of other agrochemicals and other growing decisions usually left up to the farmer.

#5 LOSS OF LOCAL VARIETIES

As this was the case with high adoption of Hybrid seed varieties. GMO seeds could lead to the loss of local varieties. Farmers will no longer continue to save local varieties and because GMO crops may contaminate the local varieties that remain.

#6 UNSUSTAINABLE MONOCULTURE

The wide spread use of GMO seeds will lead to a monoculture system of agriculture which through out history has proven unsustainable and very risky both financially because the farmers are dependant on the price at harvest time and ecologically because of pest and disease outbreaks.

#7 LOSS OF THE ABILITY TO USE BT SPRAYS FOR ORGANIC FARMERS

One of the few organic options for spraying insect & pests is the use of Bt. GMO crops. Using Bt. Genes are going to cause resistance to Bt. and leave organic farmers without that option.

#8 COMPLICATED MANAGEMENT

To prevent resistance from insect pests, Bt. Crops should use a refuge strategy which means that at least 25% of the farmers land should be grown with conventional varieties and therefore making management much more difficult.

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:

GMO & Farmers Issues – IDEP GMO article

http://www.panna.org/

GRAPHICS & EDITING BY:
YAYASAN IDEP

www.idepfoundation.org

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G.M.O. & CHEMICALS

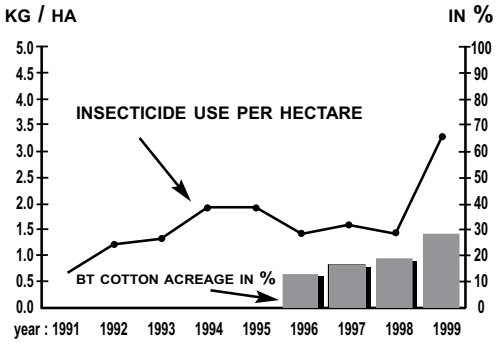
IS IT TRUE THAT WE NEED LESS CHEMICALS WITH GMO?

HOW CAN WE TRUST BUSINESSES THAT SAY...

''Bt. (Bacillus thuringiensis) crops that prevent certain types of caterpillars from eating the plants is the second most widely used GMO technology in the world. It decreases insecticide use, reduces insecticide costs and increases yields for farmers that adopt the technology.''

However there hasn't been any signifigant decrease in insecticide use. In fact in 1999 over a quarter of the cotton growing areas using Bt. Cotton in the US dramatically increased their insecticide use due to a need to eradicate a non-target pest. If standard pesticides or more sustainable farming practices were being used this may not have been necessary. (See graph for more details).

BT-COTTON ACREAGE & INSECTICIDE USE



THEY TOLD US THAT...

SO WHAT HAPPENED ?

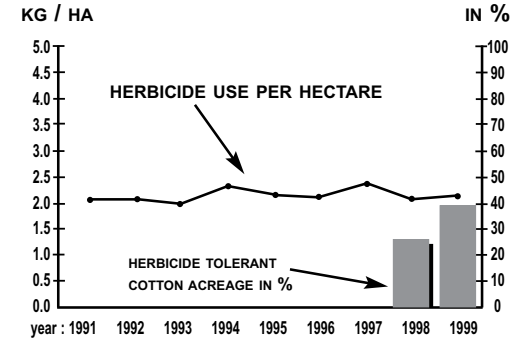
The most widely used GMO crops on the world market today are herbicide resistant crops. There are many types of GMO crops commercially grown that have this trait.

The same companies that sell these GMO seeds, own the patent on these seeds. They also sell the specific herbicide that the crops are resistant to, and they own the patent on that as well.

They say the main reason for using herbicide tolerant cotton is to improve weed control & the overall convenience of using the herbicide tolerant system they offer.

However, it seems that there has been no significant decrease in overall herbicide use since the introduction of herbicide tolerant cotton (see graph on right for more details). In fact per acre herbicide use has increased but steadily from 0.81 lbs/acre to 1.06 lbs/acre since the introduction of herbicide resistant cotton.

HERBICIDE TOLERANT COTTON ACREAGE & HERBICIDE USE



DO YOU WANT A GENETICALLY MODIFIED FUTURE?

FS.GMO#008.eng.GMO and chemicals - For More Information Contact : GMOindo@dps.centrin.net.id

SOME GM PRODUCTS ON WORLD MARKET ARE:

THEY MAY BE SOLD OUTSIDE OF THE U.S. WITH DIFFERENT NAMES!

MONSANTO

Bollgard® Insect-Protected Cotton
NewLeaf® Insect-Protected Potato
Roundup Ready® Herbicide resistant Soybeans, Cotton & Corn
YieldGardTM Insect-Protected Corn
Bollgard with BXN Cotton (Produced by Calgene, LLC, unit of Monsanto)

NOVARTIS

NK KnockoutTM Corn
NK YieldGardTM Hybrid Corn
AttributeTM B.t. Sweet corn
Novartis Seeds Roundup Ready® Soybeans

AVENTIS

LibertyLink® Herbicide resistant Corn
LibertyLink® Herbicide resistant Canola
StarLink (Bt.) Corn

AMERICAN CYANAMID

CLEARFIELD™ herbicide resistant Corn
SMART® Canola Seed

MYCOGEN

NatureGard® Hybrid Seed Corn
IMI-Herbicide tolerant Corn

DEKALB GENETICS CORP.

DeKalBtTM Insect-Protected Hybrid Corn
DeKalb Brand Roundup Ready® Corn
DeKalb GR Hybrid Corn

GARST SEED COMPANY

High pH Tolerant Corn Hybrids
Gray Leaf Spot Resistant Corn Hybrids
G-StacTM Corn Hybrids

DNAP HOLDING CORPORATION

FreshWorld Farms® Tomato, cherry tomato & sweet mini-peppers
FreshWorld Farms Endless Summer® Tomato

MOST OF THESE PRODUCTS ARE NOT YET BEING SOLD IN INDONESIA - WHICH ONES ARE?

MADE POSSIBLE THROUGH SUPPORT FROM :
Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:

BIO Member Survey (www.bio.com)
"No reduction of pesticide use with Genetically Engineered Cotton"
WWF International 2000
"Do GM crops mean less pesticde use?" Charles Be\nbrooke, The Royal Society of Chemistry 2001

GRAPHICS & EDITING BY:
YAYASAN IDEP
www.idepfoundation.org

Let's compare agricultural systems

Agricultural systems

Traditional

Agricultural practices that would have been used in villages 50 years ago, based on many years of development with very little outside influence. All agricultural inputs would have been from the local area.

Green Revolution

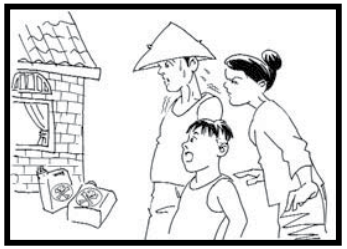
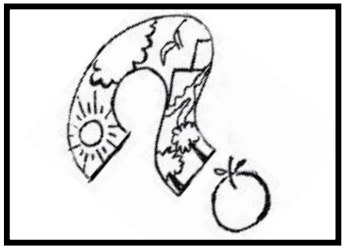
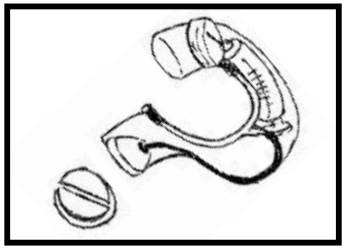
Conventional, high external input agriculture that arrived in Indonesia in the late 1960's and 1970's.This agriculture system uses hybrid seeds, chemical fertilizers, & chemical pesticides, which need to be purchased.

Sustainable

The agricultural system that is based on a "back to nature" approach to farming. It involves less reliance on seed and chemical companies for agriculture production, traditional systems and other innovative ideas.

Biotechnological

The agricultural system that uses genetically engineered or modified seeds that have been developed and imported by large multinational corporations as part of their agricultural system.

From an environmental perspective	From a farmer's perspective	From a health perspective	From the corporations' perspective
			
			
			
			

Which one would you choose for your farm & future?

COMPANIES PRODUCING GMO SEEDS TELL US THAT THEY WILL FEED THE WORLD...

10 REASONS THEY WON'T:

#1 Feed, Not Food.
The two main GMO crops grown commercially in the world – soybeans and corn - are mostly used to feed livestock, not people.

#2 Engineering for Convenience.
Research in GMO food has been for the commercial interests of food processors rather than nutritional needs.

#3 Substituting Tropical Cash Crops.
GMO is creating substitutes for tropical cash crops which will lead to poorer and hungrier farmers in the developing world.

#4 Increasing Farm Debt.
GMO seeds cost a lot more and also require other external inputs, which will lead to poorer and hungrier farmers.

#5 Promoting Unfair Farming.
GMO promoters say that farm bankruptcies are a regrettable but necessary price of greater efficiency in agriculture. This leaves farmers without a livelihood.

#6 Increasing Destitution.
Displacing "inefficient" small farmers is likely to increase famine and malnutrition not reduce hunger.

#7 Unsustainable Agriculture.
GMO seeds in agriculture are likely to have adverse environmental impacts, which will undermine the ecological basis of food production. Growing monoculture is also very high risk economically as monoculture is more susceptible to pest attack and market fluctuations than multiple-plant cropping is.

#8 Lower Yields.
GMO crops do not have significantly increased yields. In some cases, yields are lower than those for conventional varieties of the same crop.

#9 Increased Corporate Control.
GMO companies gain near-monopoly control over the growing and marketing of some agricultural commodities.

#10 Misreading the Problem.
Underlying the claim that GE foods are needed to feed the world lies a fundamentally flawed analysis of the causes of world hunger.

Made possible through support from :

Bina Desa

Compiled and Edited by Shinta Sophie & Yayasan IDEP - RESOURCES:

Ten Reasons Why GE Foods Will Not Feed the World,
prepared by The CornerHouse, UK

Graphics & Editing By:
Yayasan IDEP

www.idepfoundation.org

G.M.O. ASK YOURSELF

WHAT'S THE BEST CHOICE FOR YOUR FARM & FUTURE?

INFO ABOUT DOING THIS EXERCISE

To do this activity, show your group the FS.GMO#009.eng.Let's Compare Agricultural System. In a group of any size work your way down the list comparing the systems of Agriculture. The group discussion is more important than the actual answers. This exercise can go quickly or slowly depending on the time available & how much time you want to allow for discussion.

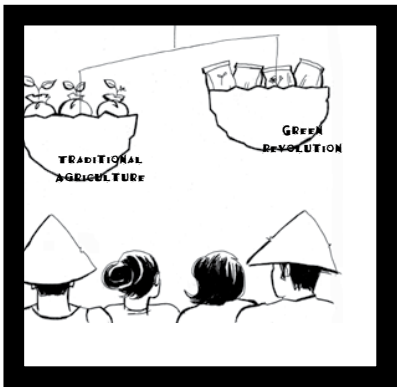
	ASPECTS OF AGRICULTURAL SYSTEMS Including things farmers pay or receive money for and non-monetary items, which are not counted by using money.	TRADITIONAL PRACTICES	GREEN REVOLUTION	SUSTAINABLE AGRICULTURE	BIOTECHNOLOGY SYSTEMS	CHOOSE 1 SYMBOL FOR EACH BOX POSITIVE FOR FARMERS / NEGATIVE FOR FARMERS / NO CHANGE FOR FARMERS QUESTIONS TO ASK...
1	SEEDS					Cost? Available in your village? Can you grow it? More/less labour?
2	FERTILIZER					Cost? Available in your village? Can you make it? More/less labour? Affects on your soil?
3	PESTICIDE					Cost? Available in your village? Can you make it? More/less labour? Do people using it get sick?
4	PLANTING					Who does it? Cost? More/less labour? Best results from planting system?
5	WEEDING					Who does it? Cost? More/less labour? Best results from weeding system?
6	HARVESTING					Who does it? Cost? More/less labour? Best results from harvesting system?
7	YIELD					Do you get more or less yield? Is product better or worse quality?
8	MARKETING					Is the crop sold more easily? Do more or less people want to buy or use your crop?
9	SELLING PRICE					Is the price you sell your crop for higher?
10	FOOD AT HOME					More or less food at home? Is it produced on your farm? How easy is it to store?
11	EXPORT					What is the export potential? Are other contries interested in buying the crop?
12	CULTURAL					Has this system had an impact on the local Culture? Ceremonies, gifts, local food etc?
13	BIODIVERSITY (CROP TYPES)					Are there more or less species of crops? Are more or less varieties or each type of crop grown?
14	SOCIAL					How systems change social practices (labour, how people work together etc) in your village.
15	WATER QUALITY					Do the streams have more or less insects, fish, frogs etc? Is the water more clear / clean?
16	SOIL QUALITY					Does the soil have more or less living things in it? Is the land harder or difficult to dig?
17	BENEFICAL INSECTS					Are there more or less beneficial species (spiders, ladybugs) in the system?
18	OTHER INSECTS + MAMMALS					Do you have more/less rat problems? Are there more/less animals in and around your fields?
19	RISK					What happens if price of the crop decreases? What happens if pests destroy your crop?
20	LEGAL ISSUES					Are there more/less legal documents in this system? Land contacts, seed contracts etc.

DO YOU WANT A GENETICALLY MODIFIED FUTURE?

SOME IDEAS FOR USING THIS EXERCISE...

Facilitator Preparation :

For this exercise it is important to have a knowledgeable facilitator. The facilitator will have to already understand the 4 basic forms of agricultural systems or else take some time to learn about the basic issues surrounding them. The GMO awareness series will help with background fact sheets and articles on Biotech agriculture.



The Group Discussion :

Start by comparing Traditional agriculture with Green Revolution agriculture. Ask the questions listed, plus any other related questions on the topic. Any specific topic may include some things that are better or worse. Allow a few minutes of group discussion for each and then put the issue to a vote.

Vote & fill in the Chart :

Let the group decide which symbol to put for Green Revolution system issues. Put an up arrow in the box if the participants feel that that activity is better for the farmers. Put a down arrow if they feel it is worse. Put a dash if there is no change or difference between the systems and its effects on farmers.

Group Discussion & System Summary :

Spend a few minutes after each comparison to summarise the pros and cons of each of the agriculture systems discussed. Then compare the Green Revolutions system to a Sustainable Agriculture system and follow the same instructions as above. Put the votes in to the appropriate boxes. Continue this until you finish comparing Biotechnology Agriculture to Sustainable Agriculture.

Follow up to this exercise :

After that you can engage in a discussion on which system is preferable and what methods can be used to achieve it. This would be a good time for the groups to make some action plans for further training and discuss how to facilitate that training. For example, where to find the resource people for Sustainable Agriculture training.

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

CREATED BY RUSS CULLINANE & YAYASAN IDEP

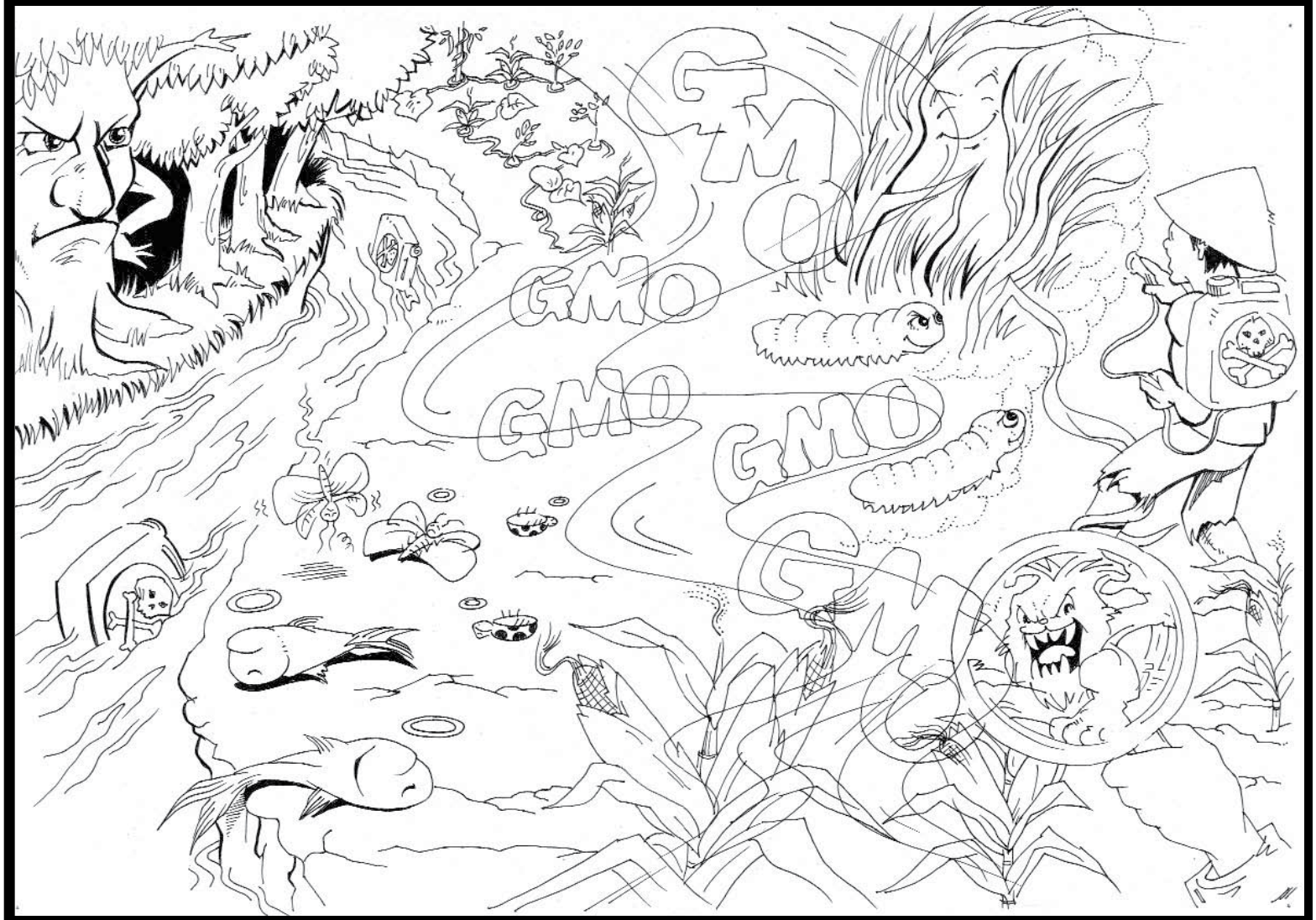
GRAPHICS & EDITING BY: YAYASAN IDEP

www.idepfoundation.org

Jln Saleh Abud No 18-19, Otto Iskandardinata Tel. +62 (21) 819 9749 Fax. +62 (21) 850 0052 binadesa@indo.net.id

G.M.O. & THE ENVIRONMENT

YOUR NATURAL ENVIRONMENT COULD LOOK LIKE THIS...



#1 GENETIC POLLUTION
Genes from GMO plants can breed with non-GMO plants, contaminating local varieties.

#2 NEGATIVE EFFECTS TO SOIL
GMO plants could negatively impact the soil ecology of the land they grow in.

#3 SUPER WEEDS
Weeds could develop herbicide resistant traits causing the need for more toxic chemicals.

#4 SUPER PESTS
Pests will most likely develop resistance to the insecticidal proteins of GMO crops.

#5 PLANT VIRUSES
Viruses often mutate and GMO crops resistant to viruses could speed up this process.

#6 INSECT & ANIMALS IMPACTS
Non-target insect and animal species may also be affected by GMO Bt (Bacillus thuringiensis) Crops.

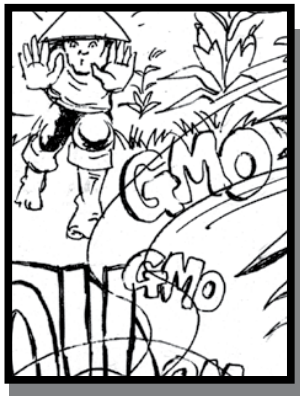
#7 LOSS OF BIODIVERSITY
How are GMO crops going to interact with existing species on the planet?

#8 FOREST ECOLOGY IMPACTS
Faster growing GMO species have the to potential to out compete native plant for sunlight, nutrients and water.

(SEE BACKSIDE FOR MORE DETAILS)

DO YOU WANT A GENETICALLY MODIFIED FUTURE?

POSSIBLE EFFECTS THAT GMO CROPS CAN HAVE ON THE ENVIRONMENT

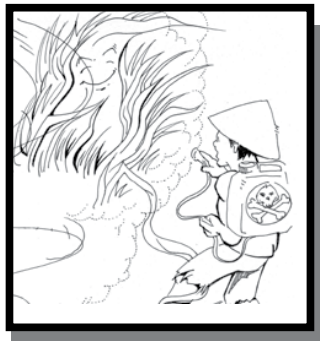


#1
Genetic Pollution

Wind, rain, birds, bees and insect pollinators have begun carrying genetically-altered pollen into adjoining fields, polluting the DNA of crops of organic and non-GE farmers.

#2
Negative Effects to Soil

Research has shown that GMO Bt. crops can effect beneficial soil microorganisms. GMO crops could transfer genes to local soil microorganisms and this may affect both soil ecology and fertility.



#3
Super Weeds

Herbicide resistant GMO crops have the potential to cross-pollinate genes with related weed species in the area. These weeds could then become herbicide resistant, which would then require stronger, more toxic chemicals to control them.

#4
Super Pests

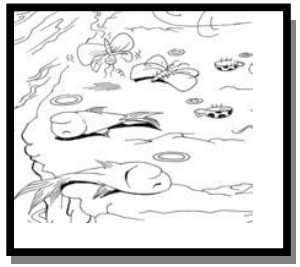
Because of their short life cycles, insect pests are known to gain resistances to specific pesticides in a very short period of time. Will this be the case with GMO crops that produce insecticidal proteins such as Bt. Crops?

#5
Plant viruses

Studies are indicating that GMO plants that resist viruses can cause the viruses to mutate into new, more virulent forms. This has the potential to cause even further damage if the virus strains continue to mutate, making plant diseases more difficult to control & treat.

#6
Insect & Animals Impacts

Studies are starting to show that GMO Bt. crops are adversely affecting a number of beneficial insects including ladybugs, lacewings, bees and possibly birds. There is also a controversial report that GMO crops have effects on certain butterfly populations.



#7 Loss of Biodiversity

It's unclear how GMO plants will interact with existing species on the planet. Without proper testing, local and global biodiversity could be in danger. Genetic contamination of related species is a definite possibility. There could be many as yet unknown interactions between species that may cause a major concern.

#8 Forest Ecology Impacts

GMO trees are designed to grow very quickly. Because of this they have the potential to compete with local tree varieties for nutrients, water and sunlight, completely changing the ecology of the forests in which they grow.

Made possible through support from :

Bina Desa

Compiled and Edited by Shinta Sophie & Yayasan IDEP - RESOURCES:

GMO and Environmental Issues - IDEP GMO Article
http://www.purefood.org
http://www.psrast.org/soilecolart.htm

Graphics & Editing By:
Yayasan IDEP

www.idepfoundation.org

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AGRICULTURE & IPR

INTELLECTUAL PROPERTY RIGHTS

OWNING THE EXCLUSIVE RIGHTS TO PLANTS & ANIMALS ???

INTELLECTUAL PROPERTY RIGHTS

Transnational companies have the right to patent seeds that they have been able to modify genetically. Farmers will be tied into contracts to buy both seeds and chemicals, and will not be allowed to plant farm-saved seed. If a farmer uses genetically engineered seeds, that farmer has to sign a gene licensing agreement, which includes royalty fees and specifies the seed, fertilizer and chemicals that must be used.

80% of the patents on GM foods are owned by just 13 corporations. Such rights have traditionally been associated with non-living inventions in industrialized and market-based economies. Now they are being used in agriculture. Patents are generally granted by a government authority conferring the exclusive right to make, use or sell an invention (including GMOs) for a period of 20 years.

A REAL LIFE CASE

Percy Schmeiser was accussed by Monsanto because he, they say, planted GMO Canola seeds without a license and did not pay the royalty fee to the company for using its technology. He claims he did not buy Monsanto's patented seed, nor did he obtain the seed illegally, and that pollen from genetically engineered canola seeds blew onto his land from neighboring farms. Monsanto's inspectors came to his farm and took seed samples without his permission. It would appear that Percy Schmeiser was a victim of genetic pollution from GMO crops.

The court ruled that he must pay Monsanto CN$ 19,832 for licensing fees and CN$153,000 for Monsanto Court costs. Not to mention the case costs to the Schmeisers, which was CN$200,000. To pay this, they had to mortgage their land and use most of their retirement savings. The legal case is now under appeal.

IPR: CORPORATE CONTROLLED AGRICULTURE

1. Farmers & native people will no longer be able to use seeds or natural resources available in their environment, or to implement agricultural methods that they have long used. Instead, they will have to pay royalties to big companies or a group of people who own agricultural product patents.

2. Monopoly practices could occur. Only small numbers of giant companies will own the patents that will give them "special rights" to seeds in the world. That mean, they will have a monopoly and determine prices, as they choose.

3. This will of course increase farmers' dependency on giant multinational companies.

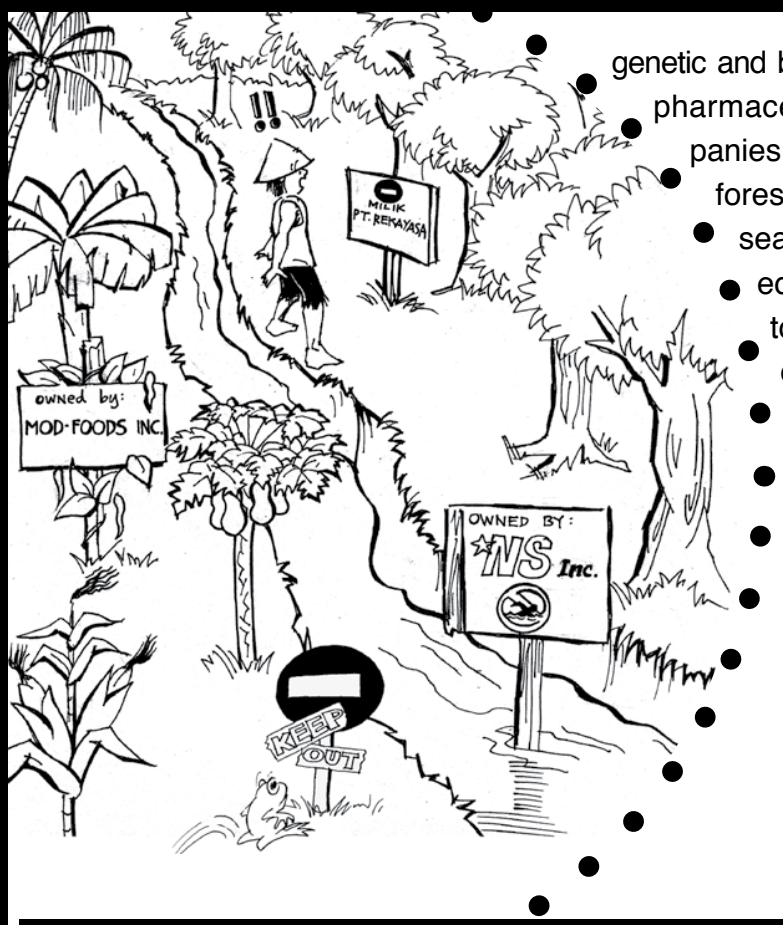
DO YOU WANT A GENETICALLY MODIFIED FUTURE?

FS.GMO#012.eng.Agriculture and IPR - For More Information Contact : GMOindo@dps.centrin.net.id

IF THEY PATENT OUR RICE THEY PATENT OUR LIFE !

BIO PROSPECTING

is the exploration, extraction & screening of biological diversity and indigenous knowledge for commercially valuable genetic and biochemical resources. A growing number of pharmaceutical corporations and biotechnology companies (& their intermediaries) are researching the forests, fields and waters of the developing world in search of biological riches and indigenous knowledge. Northern based institutions seek access to tropical biodiversity for the primary purpose of developing patented & profitable products.



AND BIO PIRACY

is theft or robbery of biological and genetic resources indigenous to a country. These biological resources are often the main targets of enterprising businessmen because of their many uses in agriculture, health care and chemical industries. The process of biopiracy involves collection of samples of biological resources; this material then undergoes product development for use on a commercial scale. Also, with biopiracy, there is no need to pay any financial compensation to the country where the biological material originated. This material is often patented.

A REAL CASE

A seed company from Texas, RiceTec patented three hybrid versions of Basmati - they are Texmati, Jasmati, and Kasmati. Ricetec produced the varieties by crossbreeding Basmati seed with American long grain rice. RiceTec was also given permission to claim that its brands (the Texmati, Jasmati, & Kasmati) are "superior to Basmati".

This company is now able to produce their own rice in America, sell it in America and even export it. That means India may lose its lucrative Basmati export market in America and other countries in the world. The Indian government is concerned, because Basmati rice export makes a large contribution to India's income, & has been the source of living for many poor Indian farmers.

MADE POSSIBLE THROUGH SUPPORT FROM :

Bina Desa

COMPILED AND EDITED BY SHINTA SOPHIE & YAYASAN IDEP - RESOURCES:

Agriculture and IPR - IDEP Article

http://www.percyschmeiser.com

http://www.natural-law.ca/genetic/NewsMay-June98/GENews5-15Rice.html

GRAPHICS & EDITING BY:
YAYASAN IDEP

www.idepfoundation.org

To Start Your Garden

1 First, you need to choose your location carefully

(start small ! – 2 m^2 or 1.2m diameter for round gardens)

Locations with too much sun will require much more care

This location is Perfect! It has morning sun, partial shade & is near the kitchen

Careful! Locations like this with too much shade won't work

2 Now choose your plants...

Your plant choice check list :

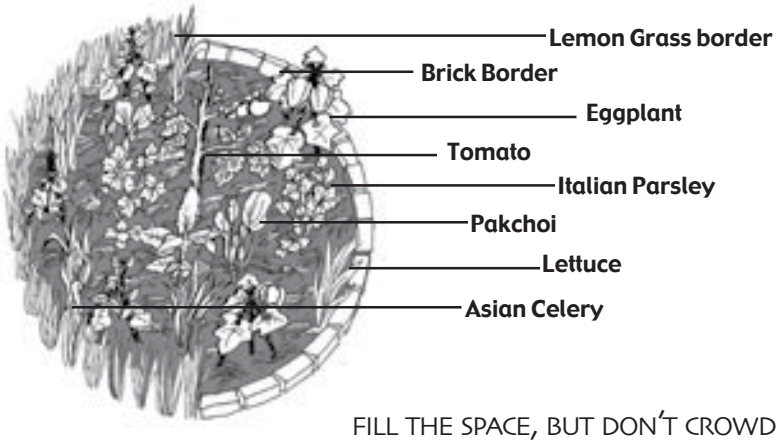
1. Choose plants you like ! ☐
2. Will they grow quickly ? ☐
3. How big they will get ? ☐
4. Is it the right climate ? ☐

You can choose from our list of organic seedlings – or you can get some cuttings from f riends. Write your choices here :

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

You can draw your own garden plan here...

3 Plan your garden's layout...



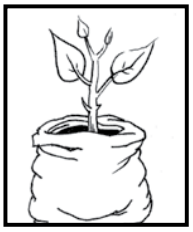
• This is an example of a simple garden plan •

FILL THE SPACE, BUT DON'T CROWD YOUR PLANTS TOO MUCH !

Now that you have a good plan for your garden – turn the page to see what you'll need to start Gardening!

These are the things that you need to start ...

LOCATION
refer back to step #1 when you choose ideal location

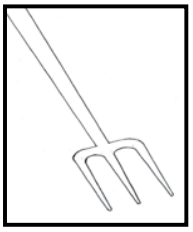


SEEDLINGS
choose at least 5 kinds that meet your check list requirements

COMPOST
you'll need quite a lot – enough to cover your garden w/ 5cm all over

MULCH
grass clipings, dry leaves, sawdust, straw, shredded paper, etc.

GARDEN TOOL
a tool like this, spoon or your hands to make holes for seedlings



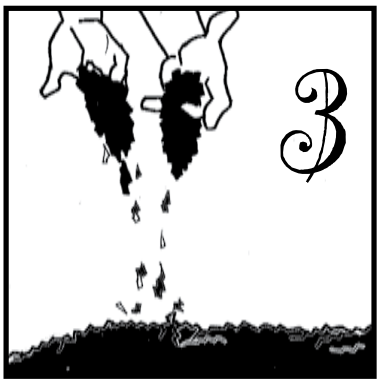
'CULTIVATOR'
or some other tool that yo can use to break up the soil of the garden bed

WATER
hoses should use a spray nozzle or else a watering can is also good

What you do to prepare & plant your garden ...

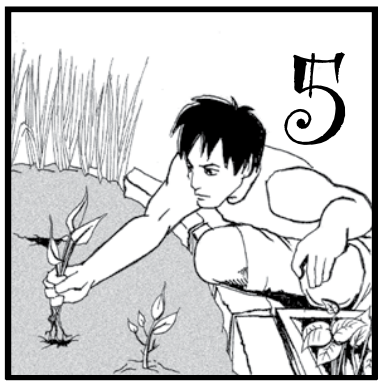
Create your garden's border as per your location plan –use bricks, stones or any good border plant like lemongrass

Break up the soil as loose as possible & don't walk on the loose soil !

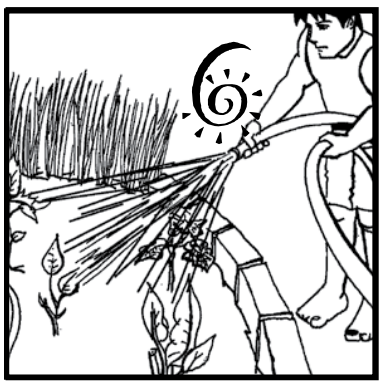


Cover the broken up soil with about 5 cm of good compost – you'll always need lots of compost so make it at home !

Mix the soil and compost together – you can use your hands, it feels great!



Plant your seedlings as per your planting plan & then label your plants so you can learn how they grow



Make sure to water your garden thoroughly – a couple of good soaks per week is better than a little bit often

Put compost around the base of all the seedlings – leaving some space for them to "breathe"

After your garden is made, remember to refer to your check list for your garden's ongoing maintenance !

If you any problems please KLIK our website:

www.idepfoundation.org

Garden Daily Check List

Look at Your Garden Everyday !

Enjoy the scenery

and harvest when your plants are ready to eat!

Daily Maintenance

Water your garden, not too much - moist but not really wet

Remove weeds, anything that you didn't plant or can't use

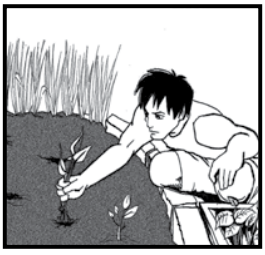
Check for pests and remove them by hand immediately, or call us

Add more compost or mulch if you see any exposed soil.

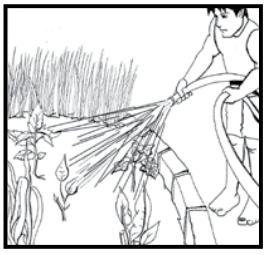
After harvesting Annuals start the planting process again. You can keep harvesting Perrenials again and again.

Cover soil with about 5 cm of good compost

Mix soil and compost together 15cm deep



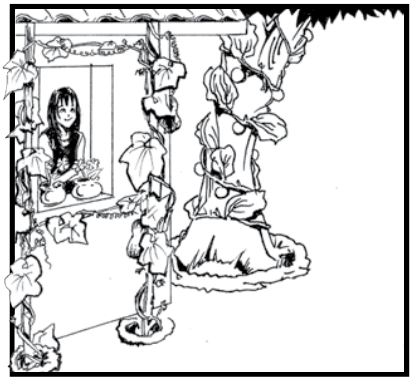
Plant seedlings, try new ones this time...



Water your garden thoroughly after planting

Put compost around seedlings and mulch space between them

Other things you can do...



Use walls or trees for growing climbing plants like marquesa or pumpkin !

Some Important Tips...

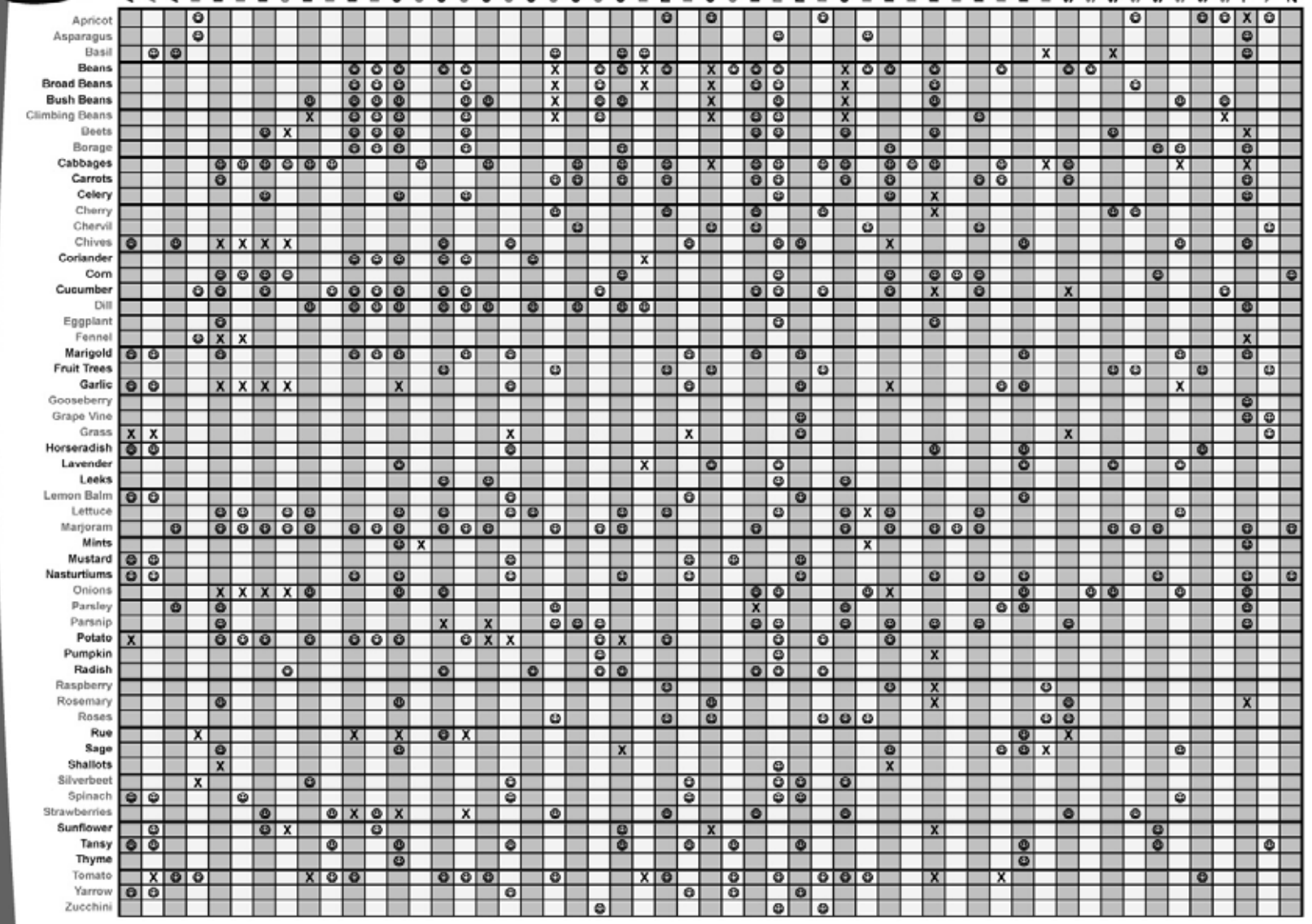
- Fill empty spaces with new seedlings (more food, less room for weeds).
- If a crop doesn't work - no worries, just try different ones.
- Planting the same thing in the same place too many times causes pests.
- Ants love to eat seeds. If you use seeds, you might loose them.Try planting seeds in pots and then transplanting them when they're ready.

For more information please contact Yayasan IDEP

see our website

www.idepfoundation.org

A Companion Planting Chart



Some Natural Insect Repellant Tips

Ants
Mint • Catmint • Tansy • Garlic • Pennyroyal • Spearmint •

Aphids
Orange Nasturtiams • Tomato leaves • Basil • Spearmint • Onions • Stinging Nettle • Garlic •

Cabbage Butterfly
Rosemary • Mint • Dill • Sage • Hyssop Garlic • Oregano • Spearmint • Tansy • Thyme • Chamomile •

Caterpillars
Garlic • Tomato Leaves • Pepper on plant's leaves •

Fleas
Tansy • Pennyroyal • Wormwood • Spearmint • Fennel •

Flies
Tansy • Rue • Wormwood • Eau de Cologne • Mint • Basil •

Fruit Fly
Tans • Basil •

Fungus
Stinging Nettle • Sage • Horseradish •

Mice
Wormwood • Spearmint • Mint

Mildew
Chives • Dried Sage • Nettle •

Mosquitoes
Tansy • Pennyroyal • Garlic • Wormwood • Sassafras: Place near windows & doors or rub on your skin

Moths
Sage • Mint • Rosemary • Thyme • Pennyroyal • Wormwood • Lavender • Spearmint •

Red Spider
Onion •

Slugs
Oak leaf mulch • Dry Rosemary • Wormwood •

Snails
Garlic: Collect w/cabbage leaves or inverted citrus peel cups

Thrips
Pyrethrum •

Tomato Worm
Garlic •

Weevils
Garlic •

White Fly
Nasturtiums • Basil: Use as spray

Designed by Yayasan IDEP Foundation • www.idepfoundation.org • Based on the Companion Planting Chart © Perennial Products NSW

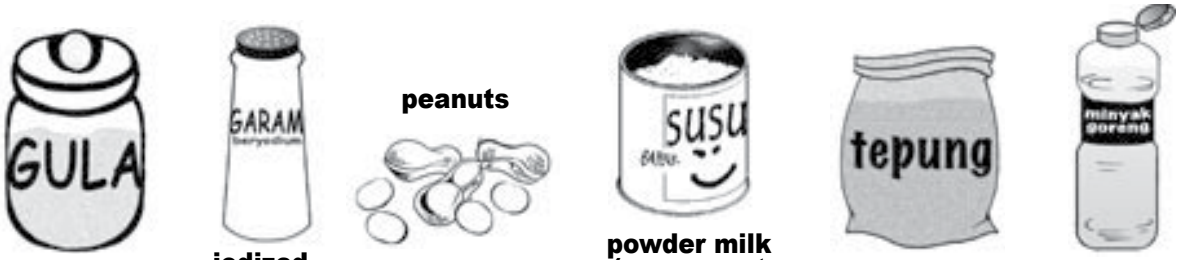
GURIH GURIH GIZI (GGG) FORMULA

HOW TO MAKE THIS FORMULA FOR GOOD HEALTH

One tablespoon of GGG has all your daily needs for vitamin A, iron and iodine, and it tastes great. This formula has been approved by nutrition scientists as being good for children, pregnant and lactating women. GGG is easy to make and can be stored for a long time. The main ingredients for making it are vegetables that you can harvest from your own garden.

INGREDIENTS NEEDED TO MAKE GGG ARE ...

marunggai leaves | water spinach | sweet potato leaf | regular spinach | bak choi

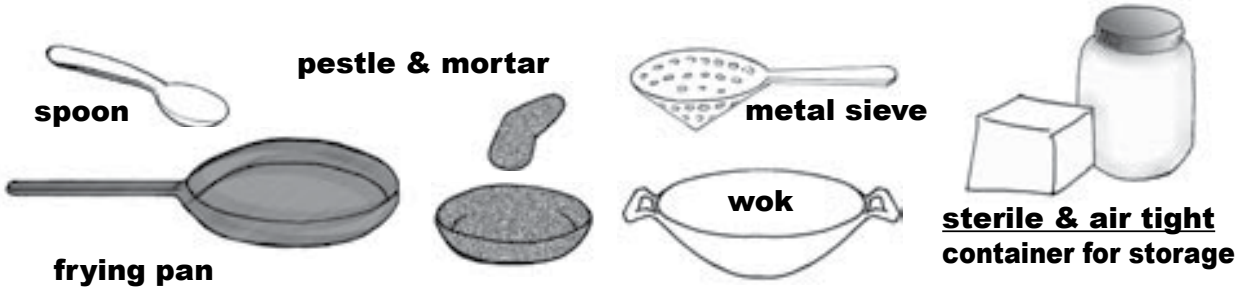


sugar | iodized salt | peanuts | powder milk (or coconut shavings) | flour | cooking oil

Mixed greens (5 types listed above)	**:**	**1 kg**
Iodized salt	**:**	**1 1/2 tbls (to your taste)**
Granulated Sugar	**:**	**1 1/2 tbls (to your taste)**
Peanuts or roasted sesame seeds	**:**	**1/2 cup**
Milk powder (or coconut shavings)	**:**	**3 tablespoons**
Rice Flour	**:**	**1 cup**
Fresh cooking oil (use one time only)	**:**	**1/2 Liter**

(after you make GGG you can use the oil again to cook other things)

THE COOKING TOOLS NEEDED TO MAKE GGG ARE...



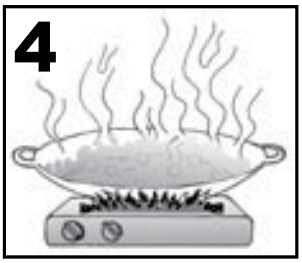
spoon | pestle & mortar | metal sieve | sterile & air tight container for storage | frying pan | wok

HOW TO MAKE THE GURIH GURIH GIZI FORMULA...

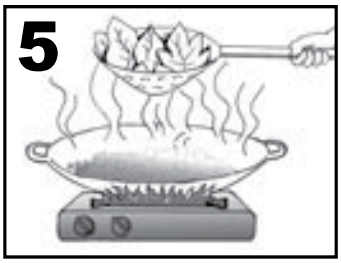
separate leaves from their stems

wash the leaves carefully

dry leaves thoroughly



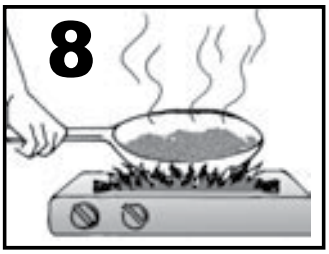
heat enough oil to cover the leaves



fry the leaves until they are completely dry and strain

after finished cooking make sure to drain all the oil off the leaves

then crush the crispy leaves with pestle



toast the flour, peanuts (or sesame seeds) without oil until they turn brown

put flour and nuts into a bowl with salt and sugar

add the milk and mix everything together

YOU CAN ADD MORE FLAVOR BY ADDING CHILI OR SUGAR AND SALT TO YOUR RECIPE

11 Sieve together...

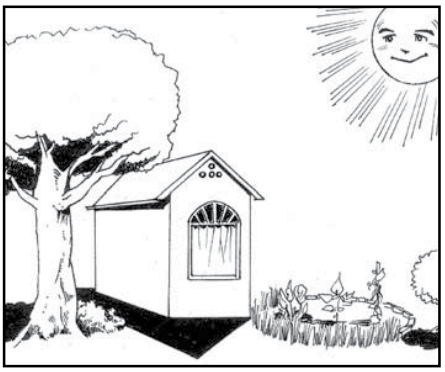
Just one tablespoon of GGG per day, will give you all the iron, iodine & vitamin A you need!

How to use Gurih Gurih Gizi. GGG is delicious when it is sprinkled on rice, porridge, noodles etc...

You need to store Gurih Gurih Gizi in air tight and sterile containers. Stored in this way, GGG will keep for 3 months, if kept in a refrigerator it will keep for 6 months.

THIS GURIH GURIH GIZI FACT SHEET WAS DESIGNED & PUBLISHED BY YAYASAN IDEP : WWW.IDEPFOUNDATION.ORG

Gurih Gurih Gizi Garden



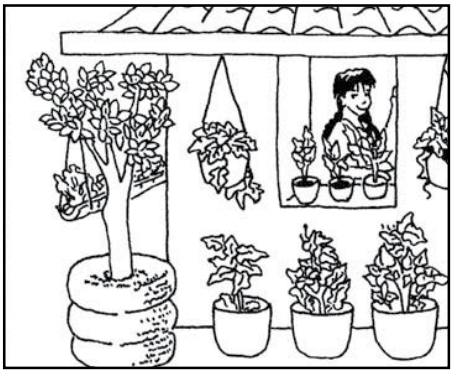
This location is Perfect!
It has morning sun, partial shade & is near the kitchen

1 Choose your location

Locations with too much sun need more care

•

CAREFUL!
Locations with too much shade won't work



And if you don't have a garden space you can grow your GGG plants in bamboo, pots & even old tires!

2 Get the plants! The five easy to grow GGG plants are :

merunggai
(plant a clipping)

water spinach
(plant a clipping)

sweet potato leaf
(plant a clipping)

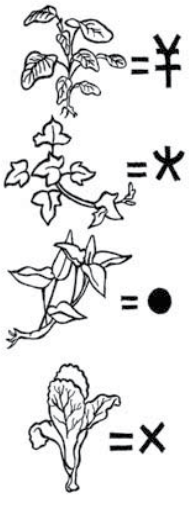
spinach
(plant seedlings)

Bak Choi
(plant seedlings)

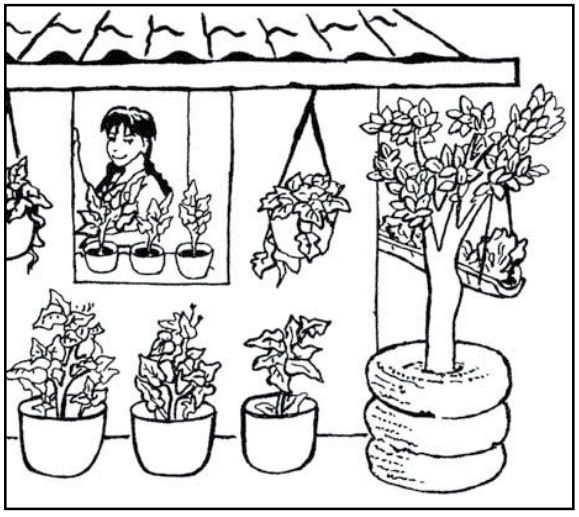
You can get all the seedlings you need for GGG from young GGG plants in your area, or use the left-overs from cooking – Also you can find most or all these plants in your local market.

3 Now you can plan your garden's layout...

Something like this...

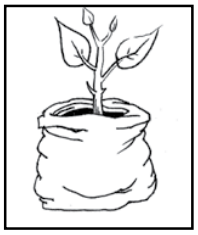


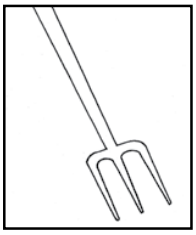
Or Something like this...



YOU CAN ALSO ADD OTHER PLANTS TO YOUR GARDEN – FILL THE SPACE, BUT DON'T CROWD YOUR PLANTS TOO MUCH !

These are the things that you need to start ...





Location
refer back to step 1 when you choose the ideal location

Seedlings
the seedlings you will need to make GGG (step #2)

Compost
you need a lot, enough to cover your garden w/ 5 cm all over

Mulch
grass clippings, dry leaves, saw-dust, shredded paper, straw, etc

Garden Tool
a spoon is fine or use your hands to make holes for seedlings

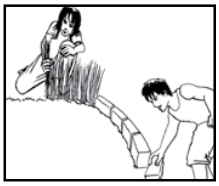
"Cultivator"
or some tool to break up the soil of the garden bed

Water
a watering can is best - if you use a hose make sure the water's not too strong

What you do to prepare & plant your new garden ...

If You Use A Regular Garden Bed :

1



Create a border around your garden (keeps weeds out) as per your garden plan - you can use bricks, stones or any plants that have barrier like roots such as lemongrass

2

Once your garden's area is defined, break up the soil within the borders so it's as loose as possible. Plants need air to breathe too! Make sure you don't walk on the loose soil that you made!

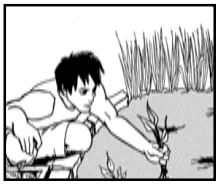
3

Cover the broken up soil with about 5 cm of compost - remember you'll always need lots of compost so make sure you know how to make it at home (it's easy)!

4

Mix the soil and compost together - you can use your hands - it feels great, and is the best way to get the soil well mixed without compacting it.

5



Plant your seedlings as per your planting plan, well spaced (about 15 cm apart), & if you want you can label your plants, so you can learn how they grow

6

When you're done make sure to water your garden well - & keep in mind that a couple of good soaks per week is better than a little bit often

7

If you find any exposed soil, put more compost around the base of the plants that need it - remember compost is healthy plant food, which will make your plants into healthy people food!

If You Are Using Pots & Bamboo :

1

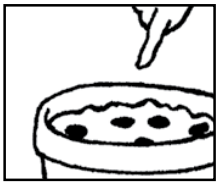
Place all your pots & hanging planters in an area where they will be sure to get the morning sun but not get burnt by too much sun all day long.

2

Prepare your potting mixture: you can use either of these...
1/2 soil + 1/4 compost + 1/4 sand
or if you can't find soil, use:
1/2 compost + 1/2 sand

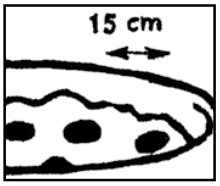
3

Fill all your pots with the planting mixture that you have made, don't pack it too tight! Then make small holes to put your seedlings in.



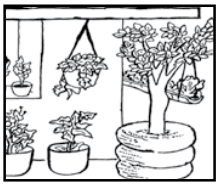
4

Plant a few of each of your seedlings per pot, about 15 cm apart, except for Merunggai which gets big so you need to plant one per big pot or about 60 cm apart.



5

Merunggai needs more space & soil for growing. One great way to plant it is in stacked old tires. We suggest using 3 tires to have a deep enough soil base.

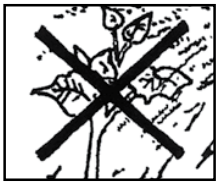


6

Make sure to water your plants thoroughly - with plants in pots you need to water after - but don't give them too much water or you will drown them. Water about every other day.

7

You SHOULD NEVER use any kinds of chemical pesticides or fertilisers!!! With compost your plants will be very strong & will contain lots of vitamins & minerals to make you healthy.



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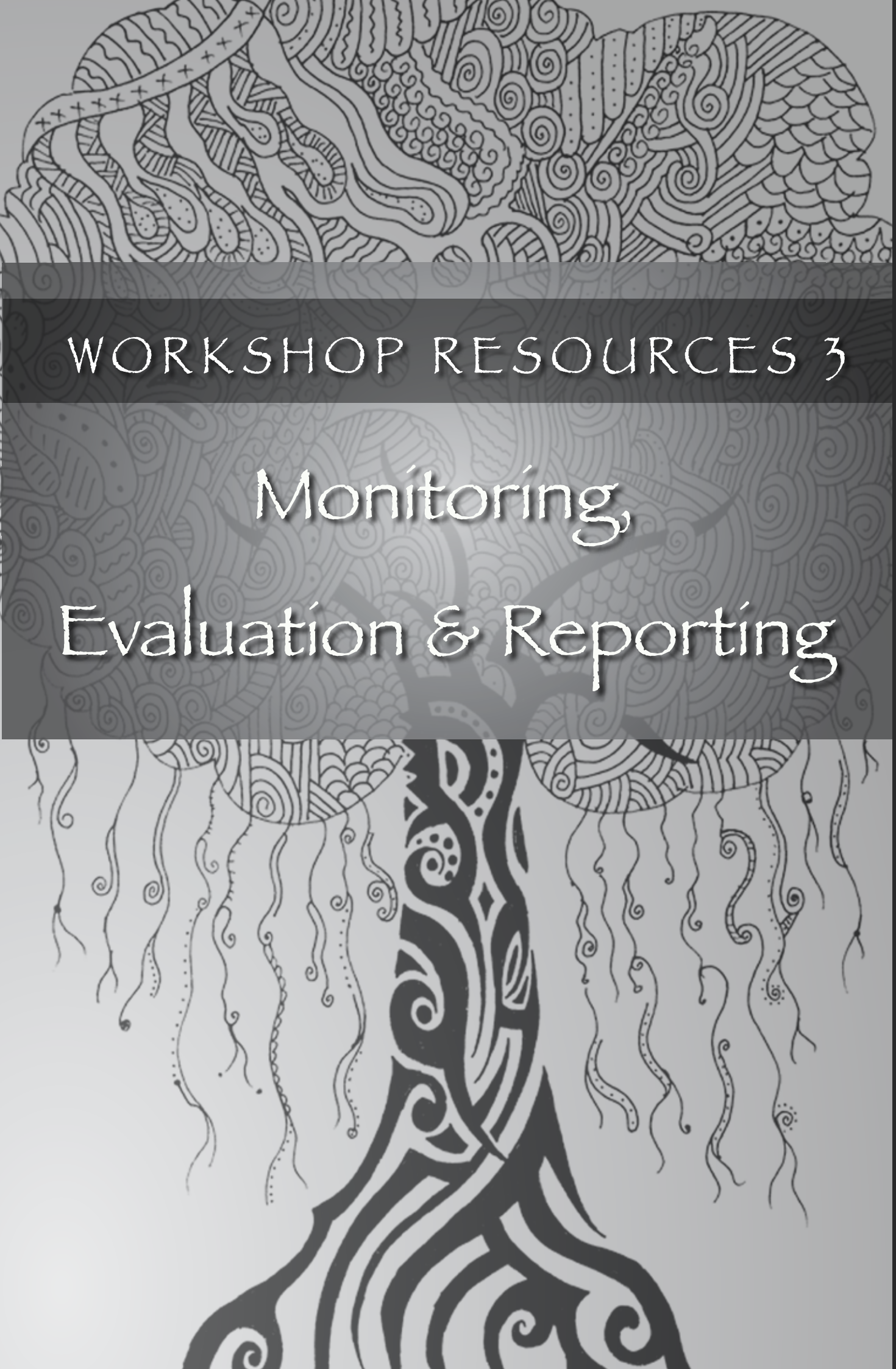

WORKSHOP RESOURCES 3

Monitoring, Evaluation & Reporting

Resources for Permaculture Workshops & Follow up - Monitoring, Evaluation & Reporting

Notes...

About Monitoring & Evaluation

What is monitoring and evaluation, and why is it so important?

- **Monitoring** provides us with information that helps us to understand the impacts of the program
- **Evaluation** provides us with data on the impacts of the project - it helps us to assess the impacts of the overall project

Monitoring and Evaluation is not just about reporting successes.

As dedicated development activists we care about the results of our work. We work hard to do things that will increase harmony and sustainability in our world.

Monitoring and evaluation can help us determine:

- **How well have we really done?**
- **Are there ways we could do even better?**
- **How can we design programs which create the most benefit?**

Our main aim as sustainable development activists is to improve the lives of the program beneficiaries (the people that participate in / or are affected by our work and their environments) in a way that will increase over time. However, people often forget:

- To ask the program beneficiaries **how they feel about the program** - how they believe their lives have been improved or changed
- To find ways to determine the longer-term impacts of programs

For this reason it is important to conduct both '**quantitative'** and '**qualitative'** monitoring and evaluation, and to conduct your monitoring and evaluation over an extended period of time - see below for more details.

About evaluation over time

Evaluation should be done regularly, over an extended period of time as:

- Many of the results and positive benefits of Permaculture techniques will continue to become clearer over time
- You need to determine whether your training / program is sustainable - continues to work and even increase its benefits on a longer term basis

---

About Quantitative Evaluation

Quantitative evaluation is objective - that means it is based on the goals of the program and the indicators which tell you if these goals have been achieved. It uses numerical measurements, data analysis and statistical methods.

Quantitative evaluation should help you to determine things like which techniques and / or lessons have been successful, and which have not.

An example of quantitative evaluation would be to count:

- The number of participants who have taken part in training / program
- How many of them were women
- Their age
- Their regular activities before they participated in the training / program
- Their level of knowledge / understanding about the topics
- What their environments were like before they participated in the program

We can then check to what degree the training / program has changed those same people and their environments over time by counting:

- The number of participants who are actively using Permaculture techniques in their community (usually done during follow-up visits to the field)
- How many of them were women or men - helps you to fill gaps and design special activities that are most effective for women and / or men
- Which activities are more suitable for different age groups / people with different regular activities
- How many of them changed their activities because of the training / program
- What aspects of their environments changed because of the training / program

By determining the right questions which will provide us with the important information needed to determine the results, **and being honest about the answers,** we can learn many things from quantitative evaluation. Most importantly, we can learn how to increase the benefits and the success of our work over time. We can also learn how to be most effective and efficient so we can make the most of our limited time and resources.

About Qualitative Evaluation

Qualitative evaluation is subjective - it offers an important opportunity for program beneficiaries themselves to identify the program impacts and to identify important changes (both positive and negative) that they have experienced because of the program.

These changes are ones that directly relate to their own lives instead of a series of goals and indicators that are established by the program designers. Qualitative Evaluation should use descriptions and /or interpretations of those descriptions otherwise it may not work. It is usually more participatory than quantitative evaluation.

During a training or at the start of a program we can ask the participants to:

- Identify what they feel are the most important aspects of the training / program
- Provide reasons why they think they are the most important

In follow-up visits:

- The same participants can be interviewed one-on-one or through focus group discussions and asked to describe their experiences with the program identifying positive and negative results.

About Participatory Monitoring and Evaluation

Evaluation is often viewed as something that is **'done to people'** - i.e. someone or a group **'is evaluated'.**

Participatory evaluation is controlled by the people in the program or the community. It is a process of reflection and consideration that assists people's development and empowerment.

When monitoring and evaluating the impact of a particular training or program, facilitators need to remember that :

Your students are your best teachers

Permaculture is a very participatory approach to community development.

The training system outlined in the 'Facilitator's Handbook for Permaculture' is designed to allow participants to solve problems as a group, through creative thinking exercises and to work together to find the most culturally and environmentally appropriate approaches to sustainable living through participatory field activities.

Permaculture is about designing and implementing integrated designs, and therefore, with Permaculture programs there are many variables and aspects of a program which can be evaluated when conducting assessments.

By using Participatory Monitoring and Evaluation systems, the project beneficiaries can teach you many things you had not even noticed before about the benefits and challenges faced when implementing Permaculture in practice.

To understand the wide range of benefits of a Permaculture program, and to ensure that the program's beneficiaries take part in at every level of the program cycle, it is important that program beneficiaries actively participate in the monitoring and evaluation of follow-up activities.

This can be done easily by:

- Collecting stories and / or pictures from the participants, or by
- Conducting focus group discussions

These approaches enable participants to actively identify the positive and negative elements of the activities.

This section includes 4 different monitoring and evaluation tools which can help Permaculture designers and workshop facilitators to evaluate Permaculture designs and monitor and evaluate program impacts at the community level:

1. **Permaculture Design Check Lists**
2. **Project Monitoring & Evaluation Booklet**
3. **Participatory Surveys & Focus Group Discussions Outline**
4. **Most Significant Change (MSC) stories**

Notes...

Permaculture Design Check Lists

External influences checklist

The following check list is useful for assessing a complete Permaculture system design and / or any component you plan to integrate into a system before you implement it (e.g. compost bins, kitchen, chicken shed, windbreaks, nursery, car park etc).

- **External Influences**: the external influences for your program may be different from the list below, list whatever external influences affect the site
- **Observe**: list your ideas of how you can use observation to assess how these external influences may have an impact on the site
- **Potential Impacts**: While at the site, note how these external influences actually do impact the site and think about how they may impact the site at other times
- **Strategies**: List your ideas about what strategies can be implemented to use and / or deflect these external influences so that they work to the best advantage for your design

Component: Liquid Compost production

Planned Location : Beside the compost bins

External Influences	Observe	Potential Impacts	Strategies
Wind	• Direction • Strength • Regularity	Good wind - useful for production, avoid direction directly into house	Add a wind mill to the system to stir the liquid compost and add air
Sun	• Direct sunlight • Shade • Temperature - at various times of the year	The direct sunlight may result in evaporation, high temperature kill bacteria	Create a covered production / storage area to reduce evaporation
Water	• Access to water • Rainfall • Water flow at site • Areas which flood	Flat areas may flood in the rainy season	Create a ditch to channel the extra water into the gardens below, put container near water source to keep liquid volume
Fire	• Fire history & direction fire tends to come from	Damaged facility	Keep away from materials that burn easily
Wild Animals	• Which animals • Direction they move • What they can damage	Mosquitos will nest in the liquid compost	Put a living fence around the liquid compost storage area, close top of the liquid compost
Pollution	• From water ways • From roads • From chemical sprays	No problem here	
Utilities	• Water pipes • Electricity lines	Provide water and aeration of the liquid compost	Position utilities safely, put an aerator in the liquid compost
Disaster	• Earthquakes • Landslides • Storms	Slope may slide if very strong rains	Plant the slope just above the facility with neem & vetiver
Traffic / Access	• Proximity to other areas • Material in / products out	Training area	Ensure enough space for trainees and easy access
Neighbors	• Sharing of resources • Bothering them	Ibu Purniyati complained about proximity	Ask Ibu Purniyati to help with gathering the materials & share liquid compost with her

Permaculture Principles checklist

The following checklist can be useful for checking if your design and / or component uses as many of the Permaculture Principles as possible.

Principle	Considerations	Assessment
Diversity	Is there a variety of beneficial plants and animals used? How do they interact?	Plant rice and green beans, green beans will inject nitrogen to the soil. Duck babies (1-2 months) eat the weeds in the rice field.
Edge effect	Which natural systems are overlapping? How does this help the design?	Plant flowers, foods (sweet potato, casava, bamboo, taro, etc) on edge of fish pond. This is useful for the fish and trees.
Energy planning	Does the design make maximum use of gravity, wind, water etc.?	Plant legume trees (gamal, lamtoro, turi, etc) in the rice field border for wind break. The legume trees will produce fodder for the animals.
Energy cycling	How does the design recycle and reuse resources as many times as possible?	Use old tires or bamboo to make garden. Tires or bamboo can be used for pots or borders of the plantation.
Scale	Is the system manageable? If not, could it be more simple and take achievable steps towards an ideal goal.	If not manageable, start from a smaller scale that is easy to maintain and build towards to another design.
Biological resources	What plants, animals, microbes used that minimize outside energy input?	Worms help to crumble the soil so we don't need to dig the land.
Multiple elements	Does each essential need / function available in more than one way?	For fences we can use bamboo, nets or plants to prevent animals entering.
Multiple functions	Is there more than one (at least three) uses for every element?	Border plants (moringga, turi, banana, jack fruit, manggo, lamtoro, gamal, etc) can be used for pest control, shade, wind break, nitrogen source, animal fodder, vegetables, fruits, etc.
Natural succession	How does the design work with and support nature and natural systems?	Indicators of an organic garden are: many worms and frogs, the plants are healthy, the soil is fertile.
Relative location	Are elements placed in a way that they benefit from each other?	Nursery near the garden, compost bin and water. These elements benefit each other because seedlings will be planted in the garden and will need compost and water.
Personal responsibility	Does the design create benefit for others? Could it have any negative impacts on other places / people?	The liquid compost needs to be near the garden, but the smell can bother other people, so we need to cover it.
Cooperation not competition	How does the design create systems that helps people to help each other?	Seed saving garden produces seeds and provides local seeds for local people.
See solutions, not problems	What problems has the design turned into solutions for addressing needs?	Garbage has become a problem everywhere but organic waste is a good solution if we make compost to fertilize our plants so we don't need to buy fertilizer.

Observation	How easy will it be to continue to observe each component of the design as they develop? Where will you be able to see from?	Everything will be easy if we use local resources to make every component in our design, eg: easy to grow local seed and share the information with others.

Local relevance and replication checklist

- Is the component culturally appropriate in the area?
- Is it made from local, renewable, easily available resources?
- Is it designed to use local / renewable resources for production?
- Is the technology feasible to be use by the target groups?
- Are the parts easily available if something breaks?
- Is the design easily replicable by others?
- Is the cost appropriate for the target groups?
- Is the time taken to create the component appropriate?

Permaculture Ethics

How does your design or design component support the Permaculture Ethics?

1. **Care for the earth**
2. **Care for the people**
3. **Care for the future**

The benefits of using these checklists

You will save a lot of time, energy and resources by taking the time BEFORE you implement your projects to:

- Consider and answer the questions in these four checklists
- Adjust your plans and ideas for the maximum benefit

Remember that Permaculture is about creating and using intelligent, well integrated designs which mirror, support and work well with natural systems

These designs will :

- Create the most benefits, now and into the future for:
  - Ourselves
  - Our children and their children
  - Our community
  - Our precious resources
- They will also make your work much easier over time

Notes...

Workshop Evaluation - Participant Feedback Form

This form has been prepared so you can give us your feedback about the quality and effectiveness of the training workshops we offer and help us to improve the workshops on an ongoing basis. Providing your contact details will also help us to keep track of those who graduate from our courses so that we can contact you in the future about new training or program opportunities.

We appreciate you taking time to complete this evaluation form.

Workshop Information

Course title :

Course dates :

Participant Information

Full Name : Gender : M F

Children :
Include each child's age and School status

Hand Phone : Home Tel :

Other Tel : Office Tel :

E-mail :

Address :

Kampung :

City : Regency :

Occupation :

Organization :

Nationality :

How did you hear about this workshop ?

- ☐ Radio
- ☐ Newspaper
- ☐ Religious Group
- ☐ Government
- ☐ Int'l NGO
- ☐ Local NGO
- ☐ Friend
- ☐ Other

Explain other (if NGO list Name):

FACILITIES : Please evaluate & give suggestions about the following

	INADEQUATE	ADEQUATE	GOOD	EXCELLENT	NOT SURE	PLEASE GIVE ANY SUGGESTIONS :
Facilities :	☐	☐	☐	☐	☐	
Food :	☐	☐	☐	☐	☐	
Bathroom :	☐	☐	☐	☐	☐	
Site :	☐	☐	☐	☐	☐	

WORKSHOP CONTENTS : Please evaluate & give suggestions about the following

	INADEQUATE	ADEQUATE	GOOD	EXCELLENT	NOT SURE	PLEASE GIVE ANY SUGGESTIONS :
Training materials :	☐	☐	☐	☐	☐	
Tools/equipment :	☐	☐	☐	☐	☐	
Language :	☐	☐	☐	☐	☐	
Delivery Rate :	☐	☐	☐	☐	☐	
Quality of Info :	☐	☐	☐	☐	☐	
Relevance :	☐	☐	☐	☐	☐	

TRAINERS : Please evaluate & give suggestions about the following

	INADEQUATE	ADEQUATE	GOOD	EXCELLENT	NOT SURE	SUGGESTIONS :
_____ :	☐	☐	☐	☐	☐	
_____ :	☐	☐	☐	☐	☐	
_____ :	☐	☐	☐	☐	☐	
_____ :	☐	☐	☐	☐	☐	

Would you recommend this workshop to others? YES ☐ NO ☐ Explain why :

What did you like the LEAST from this workshop?

What did you like the MOST from this workshop?

How do you intend to use the knowledge you acquired during this training in your daily life and your organization's activities?

Any other comments you would like to make about the workshop :

Would you like to be contacted about future workshops? YES ☐ NO ☐

Are there particular workshops that you would be interested in?

Sustainable construction materials : ☐	Sustainable Forestry : ☐
Soil rehabilitation : ☐	Household Food Security : ☐
Waste Management : ☐	Appropriate Technology : ☐
Integrated Pest Management : ☐	Seed Saving / Nurseries : ☐
Cooperatives / Small Enterprises : ☐	Wastewater Treatment : ☐
Animal Husbandry Systems : ☐	Integrated Aquaculture : ☐
Intensive Permaculture Design : ☐	Permaculture for Children : ☐
Permaculture Training of Trainer : ☐	Disaster Preparedness : ☐

Other - describe :

Other - describe :

Other - describe :

Thank you very much for your participation !

The Monitoring & Evaluation Booklet

This booklet has been designed to help document workshop / program results. It is a quantitative monitoring and evaluation tool which is used both during a Permaculture Workshop as well as at follow-up field visits.

It can help facilitators to self-evaluate at the time of trainings and then observe, monitor and evaluate the results of their trainings during follow up visits. It is also a useful tool for keeping your project supporters / donors up to date on the status of the project's activities.

The booklet is divided into three sections.

- **Section 1 - Participant Information** - filled in at the time of the training(s)
- **Section 2 - Facilitator Self Evaluation** - filled in at the time of the training(s)
- **Section 3 - Follow-up Evaluation** - filled in during follow up visits

How to use the Permaculture Project Monitoring & Evaluation Booklet

The facilitator can start by filling in the information on the front cover of the booklet:

- **Project / Workshop Name & Date**
- **Project / Workshop Location**
- **Names of Key Facilitators**

PART 1 - Participant Information

This section provides detailed information on the workshop participants.

Filling in the participant information forms

For every workshop / program the facilitator should first fill in the workshop participant information - one for each participant. There are 30 of these forms in each booklet, which can be used to document the following information:

- **Participant No** - needed later for follow up stage & data analysis
- **Workshop attended -** for example Permaculture Design Course (PDC), Composting training, Appropriate Technology Solar Cookers training etc.
- **Participant details**
  - Name of the participant
  - Their gender
  - Their Age
  - Address - for follow up visits
  - How to contact them
  - Their current occupation

WORKSHOP PARTICIPANT	No: W 231
Workshop attended :	*Home Gardens & Small Scale Nurseries No VI*
Name of participant :	*Dewi Sukanti Murna*
Gender :	*Female* Age: *33*
Address :	*Desa Wunawarian, Kelobakan*
	Banda Nera, Maluku
How to contact :	*Contact through uncle's handphone (on weekends)*
	Mobile No : 081 2345 XXXXX
Occupation :	*Housewife*

PART 2 - Facilitator's Workshop Self Evaluation

This section of the Project Monitoring & Evaluation Booklet can be used by the facilitator to self-evaluate the relative success of the workshop activities. It is filled in at the time of the workshop / training.

Step 1 - Filling in the training activities & expected outcomes

There are 12 boxes provided which can be used for listing and self-evaluating up to 12 different topics / aspects of the training.

Before and / or during the workshop / training the facilitator should fill in:

- **The topics / aspects training activity** to be carried out, for example : MOD 1 - **Creative thinking exercise** "Local ethics that support sustainability'
- **The expected outcomes of this activity -** in the 'Permaculture Facilitators' Handbook' each exercise includes an objective (expected outcome).

Step 2 - Scoring the training activity results

At the time of delivering the topic the facilitator should score what they feel is the result of that activity using this numbering system:

- **Grade 1 : CONFUSED** - Facilitator feels that the participants still seem very confused following the activity
- **Grade 2 : NOT SURE -** Facilitator is not sure how well the activity went and whether or if the outcomes were achieved
- **Grade 3 : NO CHANGE** - Facilitator feels there has been no change in the participants in terms of the desired outcome
- **Grade 4 : INCREASED ABILITY / UNDERSTANDING** - Facilitator feels that participants' ability / understanding has increased as a result of the activity
- **Grade 5 : ABILITY / UNDERSTANDING INCREASED CONSIDERABLY** - Facilitator feels that participants' ability / understanding has increased considerably as a result of the activity

FACILITATOR's WORKSHOP SELF EVALUATION

For each of the topics / aspects listed below, grade the extent of change from 1 - 5

1 = Confused, 2 = Not sure, 3 = No change, 4 = Increased Ability / Understanding, 5 = Increased considerably

No	Topic / aspect	Exp. Outcome	Grade	Explanation / reason
1	*Creative Thinking : Permaculture Principles Brainstorm*	*Participants understand principles by relating them to real examples*	*4*	*Participants gave appropriate examples and had an animated discussion about Multiple Elements*
2	*Creative Thinking : Community Waste Recycling & Disposal*	*Participants understand the benefits of recycling & waste management*	*1*	*Participants said they felt it was not their responsibility to deal with wastes*
3	*Creative Thinking : Managing & Storing Drinking Water*	*Participants identify local solutions to storing drinking water*	*2*	*Participants needed a lot of prompting to come up with ideas*

Remember...
This is not an evaluation of the facilitator's performance. It is a way to evaluate how the activities in the training were received by the workshop participants.

It is very important that the facilitator be honest when scoring.

Remember that your students are your best teachers.

Why is this scoring so important?

- Facilitators can evaluate the workshop and based on that evaluation they can improve the activities and techniques used so that workshops will be even better in the future
- Facilitators can design new exercises that are more effective by monitoring which activities were easily understood and which activities were difficult for the workshop participants
- Facilitators will be able to identify and note specific aspects of the training that may require extra attention in follow-up field visits
- Facilitators may be surprised that a topic they thought didn't work well during the training was actually well adopted by the participants and vice versa. Keeping track of the scores during and after the workshop will help them to fine tune their evaluation skills
- The facilitator can help to make the 'Permaculture Facilitator's Handbook' more useful by providing critical feedback about exercises that could be improved

Step 3 - Totalling the scores of the training activity results

At the end of the training the facilitator should add up a total score for all of the activities conducted during the workshop.

This total workshop score is useful as it can later be compared to total scores for future workshops on the same topics, and the facilitator can see progress over time.

FACILITATOR's WORKSHOP SELF EVALUATION

No	Topic / aspect	Exp. Outcome	Grade	Explanation / reason
7	*Field Activity : Design a Garden System (Garden Ex. 1)*	*Participants develop the Garden System to be implemented*	*5*	*Participants came up with several creative ideas that added value to the desings*
8	*Field Activity : Mulching a Garden Bed*	*Participants practice mulching garden beds*	*1*	*After the field activity participants said that mulching seemed like too much work for the benefits! :(*
9	*Field Activity : Pest Control*	*Participants practice various methods for pest control*	*4*	*Participants had an animated discussion after the practice and all asked to take the repellant sprays home*
10	*Field Activity : Plant Seedlings (Garden Ex. 5)*	*Participants learn about and practice planting seedlings*	*1*	*Several participants treaded on the garden beds and crushed new seedlings during activity*
11	*Creative Thinking : What are GMOs?*	*Participants learn about how GMOs are made*	*5*	*Participants were very animated after this exercise and agreed to make a nursery for self-propagating species*
12	*Field Activity : Start a Nursery*	*Construct a community nursery*	*3*	*Participants said they were already satisfied with their own nursery system*
TOTAL GRADE WORKSHOP RESULT :				40

REMEMBER A higher grade does not necessarily mean more success. Often the real results of your training will be seen later when participants start practicing what they have learned in the field. An honest workshop evaluation will help you to make decisions that will improve your workshops.

Keep in mind that there are many factors that influence the results of a workshop including:

- Appropriateness of the topics
- Participants' preexisting knowledge about the topics
- Participants' interest in the topics
- Quality of the exercises
- Style of delivery
- Techniques used for delivery
- Facilitator's skills
- Facilitator's experience

PART 3 - Evaluation during Follow Up Visits

The Project Monitoring & Evaluation Booklet has a section designed specifically for field assessment during routine follow up site visits. A similar scoring system that was used earlier to evaluate the workshop is used, based on the facilitator's observations of results with up to 6 of the workshop participants.

Step 1 - Choose the participants who will participate in evaluation

The facilitator needs to visit participants involved in workshop at their homes / places where they are implementing the activities trained during the workshop.

Select up to six (6) participants who will participate in the on-going evaluation.

The 6 participants should be chosen randomly and as much as possible gender balance should be maintained - i.e. select an equal number of female and male participants to be involved in the follow up evaluation.

PARTICIPANTS JOINING FIELD EVALUATION

No	Name of participant	Gender	Age	Location
1	*Dewi Sukanti*	*F*	*33*	*Desa Wunawarian, Kelobakan*
2	*Armansyah*	*F*	*21*	*Desa Wunawarian, Kelobakan*
3	*Desak Santi Widaya*	*F*	*45*	*Desa Wonokerto*
4	*Komang Nurbawa*	*M*	*23*	*Desa Wonokerto*
5	*Agus Samijaya*	*M*	*34*	*Desa Wunawarian, Kelobakan*
6	*Pieter Tambunan*	*M*	*21*	*Desa Wonokerto*

Remember...
Don't just choose participants you think are doing well after the training. In order to learn and become highly effective facilitators, we need to understand which aspects of the trainings work best for which types of people, and how we can make the trainings more effective for those who have difficulties implementing the activities.

Step 2 - Decide on the follow up visits evaluation schedule

FIELD RESULTS MON

No	date visit	SITE VISIT No 1			
	Topic / Aspect :	1	2	3	4
1	2-Jan-06	1	1	2	1
2	2-Jan-06	1	1	2	1
3	5-Jan-06	1	1	2	1
4	5-Jan-06	1	1	2	1
5	2-Jan-06	1	1	2	1
6	5-Jan-06	1	1	2	1
TOTAL GRADE:		6	6	12	

No	date visit	SITE VISIT No 2			
	Topic / Aspect :	1	2	3	4
1	6-Apr-06	1	1	2	2
2	6-Apr-06	1	1	2	2
3	10-Apr-06	1	2	2	1
4	10-Apr-06	1	2	2	1
5	6-Apr-06	1	1	2	2
6	10-Apr-06	2	2	2	1
TOTAL GRADE:		7	9	12	

No	date visit	SITE VISIT No 3			
	Topic / Aspect :	1	2	3	4
1	10-Jul-06	2	2	3	3
2	10-Jul-06	2	2	3	3
3	22-Aug-06	2	3	3	2
4	22-Aug-06	2	3	3	2
5	10-Jul-06	2	2	3	3
6	22-Aug-06	3	3	3	1
TOTAL GRADE:		13	15	18	

No	date visit	SITE VISIT No 4			
	Topic / Aspect :	1	2	3	4
1	1-Oct-06	1	1	2	2
2	1-Oct-06	1	1	2	2
3	6-Nov-06	1	2	2	1
4	6-Nov-06	2	2	2	2
5	1-Oct-06	1	1	2	2
6	6-Nov-06	2	2	2	1
TOTAL GRADE:		8	9	12	

It is very important to measure impact over time. Especially for a Permaculture program which will take time to develop to its full potential. For this reason, at least quarterly follow-up visits - every three months during a period of two years - are recommended for on-site evaluations. This will allow you to monitor and evaluate the results during complete crop cycles and as the general environment starts to re-adjust to the project.

The Project Monitoring & Evaluation Booklet provide for up to eight (8) assessment visits. Of course, more can be undertaken if needed, simply copy the evaluation results onto another sheet of paper.

Evaluation schedules will depend on many things including:

- The length of the program
- Appropriate times for visits as far as the participants are concerned
- Donor requirements
- Whether you have the support you need to do the evaluation visits

It is up to the facilitators and their managers to design and agree upon the field evaluation schedule.

Step 3 - On-site evaluation during the follow up visits

While at the participant's location evaluate the results for each of the (up to 12) activities included in the initial training. Grade the results using observations of what has happened and discussions with each of the 6 participants. **For example:**

- If the workshop activity no 1 was 'making compost' use the boxes under no 1 to evaluate the participants results making compost
- If the workshop activity no 2 was 'legume types and their uses' use the boxes under no 2 to evaluate whether the participants have planted new legumes and started using them

A similar scoring system is used as was used earlier during the workshops:

- **Grade 1 : NO RESULT -** Facilitator observes that the participants were not able to implement the activity at their location
- **Grade 2 : CONFUSED -** Facilitator observes that the participants still seem very confused about how to implement the activity at their location
- **Grade 3 : INCREASED ABILITY / UNDERSTANDING -** Facilitator observes that participants' ability / understanding has increased
- **Grade 4 : ABILITY / UNDERSTANDING INCREASED CONSIDERABLY -** Facilitator observes that participants' ability / understanding has increased considerably
- **Grade 5 : RESULTED IN NEW SELF INITIATED ACTIVITIES -** Facilitator observes that participants' have, of their own initiative, independently implemented new activities using the principles of Permaculture

Once you have visited all six of the participants involved in the evaluation and scored the results,

FIELD RESULTS MONITO

No	date visit	SITE VISIT No 1											
Topic / Aspect :		1	2	3	4	5							
1	2-Jan-06	1	1	2	1	3							
2	2-Jan-06	1	1	2	1	1							
3	5-Jan-06	1	1	2	1	2							
4	5-Jan-06	1	1	2	1	1							
5	2-Jan-06	1	1	2	1	1	2	1	2	1	1	1	1
6	5-Jan-06	1	1	2	1	1	1	1	1	3	1	1	1
TOTAL GRADE:		6	6	12	6	9	11	8	8	11	6	10	6

No	date visit	SITE VISIT No 4											
Topic / Aspect :		1	2	3	4	5	6	7	8	9	10	11	12
1	1-Oct-06	1	1	2	2	3	3	1	2	1	1	5	1
2	1-Oct-06	1	1	2	2	3	3	1	2	1	1	4	1
3	6-Nov-06	1	2	2	1	2	2	1	1	2	1	5	1
4	6-Nov-06	2	2	2	2	1	2	4	1	4	2	4	2
5	1-Oct-06	1	1	2	2	1	3	1	2	1	1	3	1
6	6-Nov-06	2	2	2	1	2	2	1	1	4	2	1	2
TOTAL GRADE:		8	9	12	10	12	15	9	9	13	8	22	8

the scores can be added together for an average score. You can use this average score by:

- **Comparing it to average scores of ongoing site visits -** monitor progress over time
- **Comparing it to the scores you gave yourself during the training** - You may be surprised by noting that a topic you thought didn't work well during the training was actually well adopted by the participants and vice versa.

This scoring card will help you to:

- Learn more about how long it takes to start showing results in the field
- Identify specific aspects of the training exercises that may need adjusting
- Identify ways that you can help the participants with any challenges they are facing

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Note: You can make your own version of these booklets and / or if you want to order copies of the booklet from IDEP contact: info@idepfoundation.org

Focus Group Discussions with Participatory Surveys

About Focus Group Discussions (FGD)

Focus group discussions (FGD) are great way to conduct a Qualitative Evaluation, which will help you to better understand the program's results from the perspective of the beneficiaries.

Participatory surveys can be adjusted to suit whatever type of evaluation you need. However, sometimes it is difficult to facilitate effective FGDs.

These two challenges are frequently encountered:

- Some members of the FGD are dominant while others are shy and do not contribute to the discussion
- A lot of time is spent discussing issues that have no relevance to the project - or in other words, the **focus** of the **focused group discussion** is lost.

One solution to overcoming these challenges is to use a 'Participatory Survey' as part of the FGD. By using a participatory survey you can ensure that :

- Each of the participants actively join the process
- Keep the discussions focused

Preparations for a Focus Group Discussion with Participatory Survey are:

- Enough large sheets of paper to write one survey question on one paper
- Enough cards to that each participant has one card for each question
- Enough markers so that everyone can write

Step 1 - Prepare the Participatory Survey Questions

Prepare a range of key questions relating to the workshop or activity that was undertaken with the participants.

The questions should connect to the objective of the activity / program (i.e. sustainability etc).

The questions you prepare will need to be 'Open Questions', i.e. questions that can't be answered by yes or no. For example:

- **A question that is not open is:** 'Did you learn how to compost?'
- **An open question is:** 'What did you learn about composting?'

Prepared each of the questions you want to ask on paper large enough so that everyone involved in the FDG can see them easily.

For each of the questions there are five answers from worst-case to best-case scenario, something like on the following table.

Has your understanding about farming changed as a result of this project / training?

Decreased considerably	Decreased	Same	Increased	Increased considerably

The following are examples of general questions which are related to a standard Permaculture training. **Note: These examples are simply provided to help explain the process and it is important that the facilitator choose or design questions which match the training or activity that is being evaluated.**

- Has your understanding about farming changed as a result of this project / training?
- To what extent have ideas from the training helped you get more harvests from your garden / farm?
- How much has your understanding about pollution changed because of this project / training?
- To what extent have you used waste management because of this project / training?
- How much has your understanding about nutritious foods changed because of this project / training?
- To what extent have you started eating nutrient rich foods because of this project /training?
- To what extent has your understanding about Integrated Pest Management changed because of this project / training?
- How much have you started using Integrated Pest Management because of this project / training?
- How much has your understanding about Forestry Management changed because of this project / training?
- How much have you started practicing conservation because of this project/training?
- How much has your family income changed because of this project/training?
- How much have you started using appropriate technology because of this project/training?
- How much has your understanding about Cooperatives in your community changed because of this project/training?
- How much has your community started using cooperatives as because of this project/training?

Step 2 - Form the Group for the FGD

Ideally, when forming the group there should be :

- No more than 12 participants per FGD
- Equals numbers of men and women
- A mix of age groups
- If more culturally appropriate, separate male and female focus groups can be formed

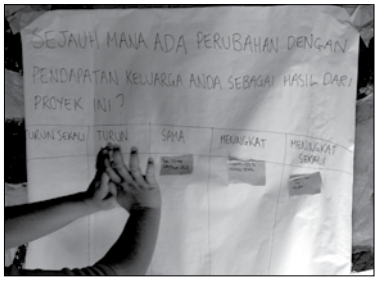
Step 3 - Conduct the Participatory Survey

Before beginning the FGD the facilitator should use the questions sheets formed in Stage 1 to hold a participatory survey.

This will greatly increase the effectiveness of the FGD as it will:

- Act as an ice-breaker for the FGD process
- Allow the facilitator to obtain personal information of the participants
- Introduce the FGD topics to the participants

1. Paste the big paper with the key question & table in front of the participants
2. For each question give each participant small pieces of cardboard or paper on which they write their name, age and gender - for example if there are 5 questions, each participant should receive five pieces of cardboard or paper
3. Each participant stands, comes to the front and pastes their cards onto the answer which best suits their situation.



This way all of the FGD participants interact, think about their answers to the question and come to the front to make their choice. This helps to create a better atmosphere for discussion and ensure that all participants participate.

Step 4 - Conduct the Focus Group Discussion

It is easier to conduct an effective FGD with two facilitators.

While one facilitator conducts the discussion with the FGD participants, the second facilitator writes up key points and issues that results from the discussion.

You can hold the discussion after the participants have made their selections on one of the questions, or participants can make their selections for all of the key questions, then start the discussions

1. The answers on the key question sheets are very general - **the facilitator now asks the participants the reasons for their selections**
2. You do not have to ask every participant to provide a reason for their selection. If quite a few people have chosen the same answer, then ask a few in order to get a sample response. **This way the FGD will not be too long.**
3. On the next key questions ask other participants for their answers to ensure that everyone takes part in the FGD
4. **Try to ensure that the discussion does not take longer than 2 hours or the participants will be bored and lose concentration**

Step 5 - Compile the data

- It is important to keep the results of the participatory survey and the Focus Group Discussion safe for use in project reporting.
- The data collected can be used for a Quantitative Evaluation (see following sections about making effective reports).

Notes...

Most Significant Change (MSC) stories

This is a simple tool that will enable you to regularly monitor and evaluate the impact of your projects by asking the program beneficiaries to tell their stories about important changes in their lives or in their area that resulted from the program.

These stories are just like simple case studies.

- Community members and local stakeholders are asked to tell what they think was most significant or important for them as a result of the project.
- They are also asked to explain why this was significant or important for them.

The stories can be:

- Individual stories describing the changes experienced by one person
- Communal stories describing the changes experienced within a community

The MSC Stories become a form of participatory monitoring and evaluation. The information gathered is qualitative data which will provide a picture of change **through the eyes of the program participants.**

After the stories are collected they are shared. Most importantly, the stories are shared with the community itself - community members should be able to read and discuss these stories.

Following is a guide to implementing the MSC monitoring and evaluation process. However, this is a general outline and extra training is recommended for best results.

Step 1 - Create a reporting time frame

You must first determine how often you will collect stories.

You will need to consider:

- How often to you visit the communities involved in the Permaculture training?
- Do you have time to conduct interviews with program beneficiaries?
- What is the duration of your project?

Generally stories should be collected either:

- Once a month
- Once every two months
- Once every three months or
- Once every six months

The usual time frame is every three months. You can collect stories at the same time you are conducting your routine site visits.

Step 2 - Decide who you will collect the MSC stories from

The MSC Stories will be collected from a selection of program beneficiaries. However, MSC stories can also be used as a good way to monitor and evaluate the wider impact of your project / program by creating stories other local stakeholders. By doing this you will be able to see the wider impacts of the project. You can:

Evaluate whether:

- Program beneficiaries have shared Permaculture techniques with other community members
- Other community members have adopted techniques after witnessing the success of these techniques in practice

Aside from direct program beneficiaries, MSC stories can be collected from:

- Indirect program beneficiaries
- Other local stakeholders, such as community leaders, district government etc.
- Facilitators and trainers
- Program field workers

Step 3 - Establish 'Categories of Change'

The MSC stories technique does not use indicators, instead it uses 'Categories of Change'.

These are broad areas of change based on the goals of your project. These categories are like sections in a newspaper – general news, international news, sport, finance etc

It is best to identify up to 4 categories of change - try not to create more than 4.

Examples of categories for Permaculture project could include:

- Changes in skills as a result of the Permaculture project / training
- Changes in overall family health as a result of using Permaculture techniques
- Changes in understanding / behavior based on Permaculture techniques; e.g. practicing conservation & supporting diversity, energy cycles, planning etc
- Changes in family income

These are just examples. Try to think about the training / project you provided and a few aspects of changes that you hope will occur as a result of the training and implementation of Permaculture techniques in the community.

Step 4 - Create a schedule for collecting the MSC Stories

Stories are most easily collected through one-on-one interviews.

When designing your schedule you need to work out how many stories can be collected during the reporting time frame. For example: If you collect stories over three months, try to interview at least six program beneficiaries (this is only 2 stories per month).

Make sure that you include on your schedule time for interviewing :

- Both men and women
- Older and younger program participants

Step 5 - Interview the participants (collect the MSC Stories)

As mentioned earlier, the Significant Change Stories are most easily collected through one-on-one interviews.

It is important to remember that the stories do not have to be long - in fact short, concise stories are best, but they do need to be relevant to the topic and clearly explain how the project / training created significant changes.

1. Prepare enough copies of the following Most Significant Change Story Sheets (see following page) so that you have one sheet for each of the interviews.
2. Visit the participants that are part of your MSC evaluation and explain to them:
    - **The objective of the MSC evaluation -** hearing from their own perspective how the project / activity had impacted their lives so that we can learn how to best conduct the programs. Sharing their experiences and perspectives so that others can learn from them.
    - **The process of creating the stories -** Those that are comfortable writing their own stories can do so, those that are more comfortable being interviewed so that someone else can write the story can do so too. The final stories will be brought back to them for verification before being publicized.
    - **The process of sharing the stories -** Let the participants know that after verification, there will be a process of sharing their story with the rest of the community and / or with other communities involved in the project. You can tell them that their story will be similar to an article in a 'good news newspaper'. If you already know how you plan to conduct the socializing of the stories you can explain it at this time.
3. Once you have answered any questions the participant may have and they are comfortable with the process and ready to be involved in the interview, you can start the interviewing process.
4. Ensure that you get all of the relevant details of the participant properly documented for future reference. The following Most Significant Change Story Sheets can be used for this.
5. Use the Most Significant Change Story Sheet as a guideline for questions that will help to create the key points for a short story. The answers can be presented as :
    - Narrative answers written directly on the sheet
    - Answers written directly on the sheet in the form of bullet points
    - Verbal answers which the interviewer can document on the sheet

Note: During the interview process remind the participant that the focus of their story should stay on the category of Change that has been predetermined. For example "Changes in overall family health as a result of using Permaculture techniques."

Most Significant Change Story No:				
Story Title :				
Story Category :				
Location :				
Interview Date :				
Participant / Storyteller Details				
Name :				
Gender :		Age :		
Address	Village :			
	District :			
	Kabupaten :			
	Province :			
Family	Married :		Single :	
	No & Ages of Children :			
Participant's Current Occupation :				
Project / training they participated in	What is was :			
	When it happened :			
Interviewer Details				
Name :				
Gender :		Age :		
Position :				
Interview				
What is the important or significant change you have experienced as a result of this project / training?				
How did this change happen? Explain the situation now compared to the situation beforehand.				

In your opinion why and how did this change occur?
Who or what helped or encouraged this change?
Where did the change happen? When did the change happen?
In your opinion, why is this particular change important or significant?
What evidence do you have that indicates that this change is important for you? As a result of this change how different is your life now or how have your future hopes changed?

Step 6 - Writing the MSC Story

This is often the most difficult part. Many people are afraid of the MSC technique because they believe they are 'not smart enough to write a story' or they think that the story has to be long and complex. This is not so. The story can simply be a series of bullet points.

The Most Significant Change Story Sheets should provide all the relevant information needed for creating a MSC story. If needed the MSC interviewer can expand on the points provided to create a story. The stories do not have to be long - in fact short, concise stories are best, but they do need to be relevant to the topic and clearly explain how the project / training created significant changes. **It should be possible to tell a story in five short paragraphs.**

Use the following checklist to ensure that the Story is indeed a Most Significant Change Story.

Most Significant Change Story - Check List	**Yes**	**No**
Can you answer these questions with information from the MSC story?		
1. What is the significant change/s		
2. Where did the change happen		
3. When did the change happen		
4. Who else is affected by the change		
5. Why is this change important		
6. How has this change improved the person's life		
Does the information adequately tell a story of significant change?		

The writer can choose from the following two methods for writing the MSC stories:

- **Reportage** - Stories written in the second person - similar to a newspaper story
- **Narration** – Stories written in the first person in the form of a dialogue

Training may be useful to assist with simple writing techniques.

Step 7 - Verification & feedback on the MSC Story

The most important part of this process is to feedback the information gathered in the stories to the community members. **This way the technique is not only a monitoring and evaluation tool, but an important way to motivate the community by providing and sharing examples of success and change.**

Verification

If you have conducted an interview with a program beneficiary and written out bullet points or a short story about the most important change they have experienced you need to go back to the same beneficiary and read the story back to them.

Reading the story back to the participants will provide:

1. A chance for the information to be verified
2. An opportunity for the participant to add more relevant information once they hear the story

The facilitator / interviewer should also take this opportunity to ensure that:

- They have the full name of the SC story participant
- They have checked the spelling
- Note: They might have agreed to use an alias

Feedback to the community

After verification, you can share the story with the rest of the community and / or with other communities involved in the project. This can be done in many ways and you should always consider issues of illiteracy and come up with clever ideas to share the stories with as wide an audience as possible.

Some ideas include:

- Post the story on a community notice board or in a central meeting place where many different people can read the stories.
- If you hold meetings with the project participants, start the meetings by reading out some examples of the story and encourage the community members to comment on the stories. Note: This is also a very handy way to generate new stories from the community.
- Is there a community radio network in your program area? If so organize to read some of the stories on this radio network.
- **Note:** Stories may be best translated in local dialects

Step 8 - Quantifiable evaluation of MSC stories

MSC stories can be further analyzed to provide Quantifiable Data by documenting and analyzing the data provided by a set of MSC stories. Then this data can be used in project / program reporting (as well as the stories themselves).

See the further section of this chapter for more information about data analysis and reporting.

Some of the things that can be measured include:

- Number of stories per 'Significant Change Category'
- Number of stories written by women
- Number of stories written by men
- Social status of the story teller (poor / middle class / rich)
- Age range of the story tellers

Through this type of analysis we can identify the most common important changes being identified by the program beneficiaries themselves.

MSC Story Sample 1 "Ibu Lisa Expresses Herself"

Ibu Lisa experienced many significant changes as a result of the Yayasan PODO Program. The most significant change she experienced was her ability to speak her mind freely in her village.

Ibu Lisa is a housewife in Molari, Wayanesa, West Timbu. She is 38 years old and has 3 children, one daughter and 2 sons. In May 2005 Ibu Lisa joined the Small Enterprise Development Program that was facilitated by Yayasan PODO.

The Small Enterprise Development Program's aim was to help increase the income of poor families in the area. The program included several initiatives such as the supply of farming tools and goats, training in organic farming and the development of a traditional weaving cooperative. The program's participants were mainly women and all of the women involved were asked to participate in the planning and implementation processes of the program.

Ibu Lisa explained that at the beginning of the program, when she joined community meetings during the planning stages, she felt very nervous sitting next to people that she didn't know.

"I had never been to a meeting before. I thought that these kinds of meetings were men's work and women weren't supposed to have these kinds of opinions," said Ibu Lisa. *"Women's role was in the kitchen cooking for visitors. I felt really nervous the first time I was asked to talk, I wasn't able to say anything!"*

After that, bit by bit Ibu Lisa felt more confident to speak and eventually she became the Leader of the Traditional Weaving Group that was part of the program. These days many people hear Ibu Lisa's opinions. She said that this new ability to speak up was not only a change that she herself experienced but a change that she saw in many of the women in her community at large.

"Before this program happened it was expected that women would stay quiet. Decision making was done by men only" said Ibu Lisa. *"But nowadays this has changed. Women can be involved in decision making and their opinions are given equal value to those of the men."*

Ibu Lisa also said that she invited many women to participate in the participatory planning meetings so that they could make choices about the trainings they wished to have. What the women chose together was weaving. As well as joining this weaving training Ibu Lisa also joined an organic farming training together with her husband.

Ibu Lisa said that she now has new skills and she feels more able to help with the financial needs of her family. With the income she gets from selling her weavings her family's general income has increased by 30%. She is now able to send all of her children to school. Ibu Lisa's wish is to be able to support her children all the way through college. She especially hopes that this will be possible for her daughter.

"My hope is that the women in my community will continue to work together and develop and gain new skills and that my daughters will have more opportunities than I did".

A Kitchen Garden brings Health and Vitality

Mustlane is a village that was devastated by the Tsunami in December 2004. Before the tsunami most of the community members were fisher folk. One of these people is Ibu Laksini who used to work with her husband drying the fish that he caught and selling them in the local market place. Ibu Laksini's husband died during the tsunami leaving her with 4 children to take care of on her own.

These days Ibu Laksini is able to ensure that her children have good nutrition from a kitchen garden that she has made next to her new house. She also has some chickens that supply her family with eggs and meat on a regular basis. Ibu Laksini is 43 years old and has 4 children, 3 daughters and 1 small son.

Ibu Laksini says that this significant change has happened since she joined the Good Nutrition through Kitchen Gardens Program which was facilitated by Yayasan BITAMA. Ibu Laksini joined the program in July 2005. The Good Nutrition through Kitchen Gardens Program included a training about good nutrition and how to make and maintain kitchen gardens and small nurseries. It also supplied the training graduates with organic seeds, seedlings, root stock and chicks.

Before Ibu Laksini joined the program she and her children were only eating the food that was given out a the local refugee camp and some fish that Ibu Laksini bought at the local marketplace once a week using the money she made from a cash-for-work programs. Her children didn't have much energy and stayed inside most of the time. They were also often sick and always getting infections.

"From my kitchen garden I get many different kinds of healthy organic vegetables, herbs and roots everyday that I use for cooking food for my children," said Ibu Laksini *"I can also use some of the roots and herbs to make medicine."*

"Before I joined the nutrition training I didn't know how important different kinds of vegetables with lots of vitamins were for keeping my kids healthy", she said *"these days my kids have much more energy and vitality and they eat much more than they used to."*

Ibu Laksini said that she was now able to use the small amount of money that she had to buy meat and tofu and that she got all of the vegetables, herbs and eggs that she needed straight from her own garden system.

She also said that she and her children really enjoyed tending the garden each day and that many of her neighbors were impressed with how many different things she was able to grow and how big and healthy the plants were.

Ibu Laksini is helping some of her neighbors to start their own kitchen gardens and sharing seed stock and cuttings from her healthiest plants with them. She is very grateful that her children's health is so much better now that they are getting good nutrition every day.

"I was very worried about my children. They were always getting sick and had many sores on their feet and legs. Now they are much healthier and I am able to ensure that they stay healthy by simply maintaining my garden".

A Bamboo Weaver increases his income through Creative Designs

Metawae is a village where most of the community members are bamboo weavers. One of these people is Mr. Daluan who has been a bamboo weaver all his life.

Mr. Daluan is responsible for the life of his family. These days he can afford to put all of his children through school while he also has enough income to support his family's basic needs. He is 51 years old and had 4 children, 3 sons and a daughter. All of his children are now in school, 1 in High School, 2 in Secondary School and 1 in Primary School.

Mr. Daluan says that this significant change has happened thanks to The Small Bamboo Enterprises Program which was facilitated by YASUPALU. Mr. Daluan joined the program in May 2005. The Small Bamboo Enterprises Program offered small enterprise loans for the local bamboo weavers, as well as production and marketing training for their products.

Before Mr. Daluan received a loan from the Small Bamboo Enterprises Program he only had very minimal funds that he could use for his work. He was able to afford 40-60 bamboos per week, which was enough to make 4-5 sheets of plain Gedeg bamboo weavings. He was able to sell the plain sheets for Rp. 5.000 each, and his weekly income was only Rp. 20,000 to Rp. 25,000 per week.

With the loan Mr. Daluan was able to buy 100 pcs of bamboo. He also joined a bamboo weaving design training. After the training he was able to dye bamboo and add new motifs in the weavings that he made. With his 100 pcs of bamboo Mr. Daluan was able to make 10 sheets of special motif Gedeg weavings that he could sell at a much better price, Rp. 25,000 each. After that his new income was about Rp 250,000 per week.

"From the profit that I made from the new weavings I was finally able to save some money. I could use this money for my children's education and I was also able to buy iron for fixing the roof on my house while supporting my family's needs.' said Mr. Daluan. *"Before this time I wasn't able to afford to pay for my children's schooling, or even to cover my family's daily needs, I just didn't have enough."*

Mr. Daluan also said that women's involvement in the program had been very beneficial. Many women joined the planning meetings for the program and gave very useful inputs and suggestions. An example of this was that one of the women in his community went to Jogya to learn the bamboo dying and motif weaving techniques and it was she that taught him, and others in his community, about how to make the new weavings which helped to increase his income so dramatically.

He has also joined a community cooperative that is now working together to plant and propagate new kinds of bamboos so that they can make new designs and products in the future using their own bamboo.

Mr. Daluan is very grateful that he is now able to supply his family with their needs and also to support the education of his children.

"I am very proud that my children will now all be able to complete high school and that someday they will be able to get good jobs, this really makes my life fulfilled".

Creating Effective Reports

About effective reports

Reporting is a key component of almost every project or program. This is the project team's opportunity to self-reflect and share with others: what they have done, how they did it, what they have learned and finally what the project / program has managed to achieve towards the project's mission.

Reports are generally made to be read by other people and by keeping in mind a few key points you can make your reports much more effective in terms of sharing your results with others in a way that they will be able to understand and digest what it is you want them to know.

Effective reports are:

- **Informative -** contain clear information that helps the reader to really understand the true results (impacts) of the project. The report should also clearly explain what the problem / situation that was addressed by the project was, and how the problem was addressed by the project / program.
- **To the point** - often reports are much too long and contain lots of background information, information that does not necessarily relate to the project or that is not necessary for the reader to know. This can be frustrating to the reader. The reader just wants to know what the result of the project was and what methods were used to get those results.
- **Justifiable** - the information that is used in the report must be true and the methods used to compile and generate that information should be clearly explained. The methods used for compiling project impacts / results should also be ones that can be checked later. Usually this is done by compiling and analyzing data about the activities conducted and the results of those activities (see following section for more details on compiling and analyzing data).
- **Interesting -** you can make your report much more interesting to the reader by including photographs which show how the project was done and 'personal interest stories' - i.e. stories about / by the people that were directly involved in the project and how the project impacted their lives.
- **Understandable -** sometimes it is hard for people who are not there in the field to understand what it is really like.
- **Appropriate -** when a donor supports a program / project an agreement is usually made beforehand about what their support will be used for. This can be in the form of a budget and / or MOU (contract), or even sometimes a verbal agreement. The report that is made for that supporter needs to clearly explain how you used their support to achieve the agreed goals. If challenges were faced in achieving the agreed goals they need to be clearly explained.

  Note: If challenges in achieving agreed goals are being faced once a project starts you should contact your supporter right away, explain what is happening and work together to find the best solution to amending the agreement. Otherwise the supporter may ask for their support to be returned to them, and chances are they will not agree to support your work in the future.

Compiling & analyzing data

The results of your monitoring and evaluations should be able to supply you with important data which you can use for creating effective reports.

> **This is why it is so important that you document the results of all of your evaluations and keep copies of these results.**

With Qualitative Evaluation methods such as Participatory Survey / Focused Group Discussions & Most Significant Change Stories you can analyze and summarize the results of the evaluations to generate quantitative data which is easier and quicker to read in a report. For example:

Convert the results of a Participatory Survey / Focused Group Discussion into data for reporting:

1. Document the names and other personal information written on the cards - these may be useful as an attachment to your report and if you plan to follow up with them later
2. Note how many of the participants answered "decreased" or "same" etc. to a particular question
3. For one set of answers like "decreased" note how many of them where women
4. For a group of women who answered "decreased" note how many of them were under or over 30 years of age.
5. You may choose to present the data in a table to make it easier to read. See Table 1. for an example of how this could look. **This is the data that explains, from the participant's perspective, what the impact of the activity was.**

You may choose to further analyze the data by calculating the percentages of various results - this makes it even easier to understand the impacts of an activity, especially if your project involves a lot of different people.

How to generate percentages:

1. Divide the data from one of the results in Table 1. by the total number of participants in the activity - see table 2. for an example.

Data for a report could look something like this:

Changes in understanding about farming as a result of this project / training

Workshop: PDC XIII	Decreased considerably		Decreased		Same		Increased		Increased considerably	
Gender :	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Under 30 years:			1		1		4	4	2	2
Over 30 years:				2		2	5	2	3	5

Table 1.

Total participants : 33 people

Under 30 years:			3.3 %		3.3 %		13.3 %	13.3 %	6.7 %	6.7 %
Over 30 years:				6.7 %		6.7 %	16.7 %	6.7 %	10 %	16.7 %

Table 2.

Qualifying the data on a report

The results of a Focused Discussion Group can then be used to explain the reasons behind this statistical data, for example:

- 3 participants who are farmers increased their income from Rp. 3.000.000 per month to Rp. 15.000.000 by integrating an aquaculture system into their farm
- Productivity on farms was increased by 60% after using mulching, compost and liquid fertilizer
- 2 hectares of unproductive land was converted into fruit orchards
- 2 small scale nurseries were established which are now working together to do seed exchanges

Most Significant Change Stories can also be a good attachment to a report.

They will help the reader to:

- Understand the results of the activities undertaken
- Gain a better understanding of the project's participants

About using photographs and / or videos for reports

Appropriate Photographs are one of the most effective ways of "proving" the results of a project's activities and their results. People say that:

"A picture says a thousand words"

Images also add a lot of interest to a report. The reader can get a much stronger "feeling" about the general environment where the activities were undertaken through the use of images.

When using photos or images in a report it is important to remember to select the photos which explain the project's impacts the most clearly. This will be photos that:

- **Show "before" and "after" images -** what the area looked like before the project was implemented, and what it looked like afterwards (what changed)
- **Prove the results -** for example if your project explains that "2 hectares of unproductive land was converted into fruit orchards" photos of the land before it was planted and then the fruit orchards, and participants selling the fruits etc.
- **Document steps in a process -** for example if your project included building a workshop for a local cooperative, you can show the steps undertaken to achieve this, i.e. building the workshop area, installing the equipment, the cooperative members working in workshop area and the trade or sales that resulted
- **Show how sponsors money was used -** if a sponsor gave you money to build composting units a photo of the units when they are made is good way to make them understand what was done and "feel good" about the results

Using Visuals - Photos and Video

Some tips for making effective photos

Be prepared before taking the photo

- See in your mind the shot before you take it. Remember that what you see with your eyes will look different on a simple 2 dimensional photo
- Be clear in your mind – what kind of photo it is you want, and what story do you want it to tell, **before you use your camera**

For example these photos both show a Permaculture training :

A difficult to understand training photo

An easy to understand training photo

Identify & focus on the subject of your photo

- Keep subjects simple - cluttered shots (with too many different things in one image) can confuse the people about what you are trying to show
- Make sure there is nothing too distracting in the background

A hard to see photo of produce

An easy to see photo of produce

Where appropriate photograph subjects against a plain background – you can even make a backdrop of your own using a sheet, wall etc.

- It is often impossible to capture all of the aspects of your work in one single image - think about dividing your photos into a series of shots, which illustrate the steps, or various aspects, of the subject
- Unless you need a general overview shot – it is better to focus on individual elements of a project

Step 1. Seeding Potting

Step 2. Seeding Potting

Step 3. Seeding Potting

Step 4. Seeding Potting

Documenting the progress or stages of an activity

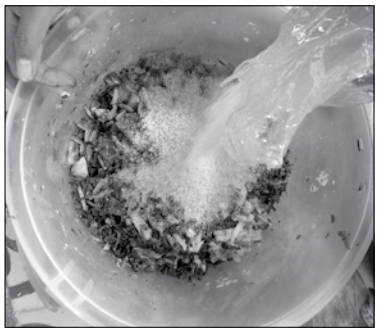
- To clearly explain an activity and its processes you may need to take photos at several stages. This can include before the activity starts, the steps of implementing the activity and the result once the activity is done.
- If you are recording a process, you may need several photos to explain it
- 'Before' photos show the impacts of your activity. Photograph the site before any work if done. For example, if you are photographing the transformation of a plot of land, capture the problem – what is wrong in the area that the activity will address. This will help you to explain the transition and progress of your work.
- If it's a 'before and after' series – try to capture a 'like for like' pair of shots, ie. Take the 'after' shot from the same angle, position and include the same area, as the 'before' shot if at all possible. This will make the change easier to see and understand.
- Remember, this is your opportunity to express how successful your project has been (or otherwise).
- Return to the site later for an updating picture when for example plants are more established, fruits appearing etc.

"Before & After" photos show a yard that was full of litter, cleaned by children & then used as a play ground

- If you are recording a method of constructing or making an item, get individual shots of the raw materials before they are used and each step of the process
- Try to document each key stage of work – usually you will only get one chance to do this so be ready when the work is happening to take the photos

Step 1 - making Bio X

Step 2 - making Bio X



Step 3 - making Bio X

- You may even need to stop work briefly to take the photos and / or ask people to remove themselves from the shot, if they are not needed to show the process, or even repeat actions (see below 'mocking up' section).
- For 'after' or 'results' pictures – wait until all the work is complete, i.e. the plants are bedded in and landscaping is finished. Clear away any clutter, litter, tools or people that you do not want in the picture before taking the shot.

Considerations about lighting

Lighting is the most common area where people make errors when taking photos. However, most lighting errors are easily avoidable. The basic rule for lighting is : the brighter the light = the deeper, darker the shadows. **Think about your source of light (where it comes from) -** What kind of light is it? How will affect your picture?

IMPORTANT - Don't have people or objects:

- Facing directly into the sun
- Facing bright light
- With a bright light source or the sun behind them

The above will create over or under exposed, unclear images, with harsh lighting, squinting subjects and unwanted silhouettes and / or shadows.

Not enough light / no flash

Too much sunlight

Light source behind the subject

- Try to avoid 'red eye' and 'white-out' by making sure your flash is not too bright and / or too close to people's faces or the object you are shooting
- If there is not enough natural light, use a flash and / or a tripod to avoid blurry photos caused by the camera shaking while you take the photo
- Use a flash to deal with dark shadows - even outdoors in bright sunlight – this can dramatically improve the quality of photos
- A partially cloudy day or shade offers softer light with a better range of tones, which will make much clearer photos. If possible, move plants or objects into the shade or even inside before taking the shot.
- Early morning or evening usually offers the best, most gentle lighting.

Good afternoon light

Good morning light

Nice light effect in semi shade

Note: With digital pictures - It is often better to over-expose a little (give too much light) rather that under-expose. **Because with computer editing software– you cannot add light that does not exist – but you can reduce some brightness.**

Considerations about composition

Angles and positioning for taking photos

- Use your feet - get as close to the subject as you can and don't be afraid to change and experiment with your position
- Use your camera's zoom or even macro function if it has one, to show the detail of seedlings, plants, equipment, products and tools etc. **But make sure the photo is still in focus (i.e. you're not too close)**
- Ideally your subject should fill the frame – be conscious of what is in the frame and at its edges. **It is better to leave more space around your main subject than going in too close, you can always crop the photo later.**
- Change your angle – experiment to see what works best. You can kneel, crouch down to the subject's level or even lie below it, or use something sturdy to stand on and to shoot the photo from above the subject

Photo shot from above

Shot from below

A full frame showing the teacher & students

- Change the camera's position – use landscape (sideways) or portrait (upright) shots which best frame the shape of your subject
- You can make shots more interesting by focusing on something in the foreground and placing items of interest slightly off-centre in the frame

Photographing people

Photographing people well is not easy – so think about if you really need people in the picture - they can be very powerful if used properly – or distracting if used badly.

People in photos can be used:

- **To explain techniques** – show people doing the activity
- **To give sense of the size and scope of the work** – for example a hand can show how big a tomato is and / or a group of participants show how many people joined a training etc.
- **To give a personal aspect to your photographs –** if people are happy or inspired by your work their expression in a photo can show this.
- **To explain the context / environment -** show what kind of people are involved in your work and how they are affected by its outcome.

A person showing size & results

Avoid distracting objects/people in the background of a photo

You only want things growing in the right place – and not seemingly, out of someone's head ☺.

Be aware of what is behind and in front of the object you are photographing.

Example of an un-useable image because tree is blocking subject

Use hands are a very useful area to focus on/zoom in on.

- Showing hands can be an effective way to introduce a human element without it being too distracting
- Hands can give an aspect of scale and technique used
- Note: another common method of demonstrating scale is to place an object like a trowel or ruler next to the subject

A seedling representing new growth

"Planting Begins"

Clear foreground & blurred background

Reconstructing scenes before taking the photo

Hard to read shot of garden work

Reconstructed shot of garden work

It is nice to try and capture people candidly at work. They can look natural, relaxed and it looks 'authentic.'

However, it's not always easy – especially if you are either in the way of the workers while taking photos and / or one of the workers yourself.

What is a more viable option – and used by all photographers – is to reconstruct the action that you want to document.

Through reconstructing the scene to take your photo you can control the situation more easily – and make sure all the elements you need are in the picture.

Wait until a convenient time or stage in the work and ask people to reposition themselves so that you can take the photo you need.

About Photo captioning

Caption your photographs as soon as possible, before you forget any of the key information. **Note as much information as possible, including:**

- **Who –** who is the subject of the photo
- **Event (What) –** what is the photo about
- **Location (Where) –** where was it taken
- **Event Date (When) –** when was the photo taken (date) and what stage of the process does it demonstrate
- **Why –** why is the action happening, what's is the purpose
- **How –** how does the process your photo describes work
- **Credit –** give yourself credit - list your name as the creator of the photograph

About making and choosing the best quality photos

You don't need more than one good photo for each subject. Select the photo that you think demonstrates the story you are telling the best so as not to overload the viewer with too many images about the same thing.

- Think about where your photos will be used
- Try to use the best film or highest resolution digital equipment you can - do not shoot pictures in low resolution just to save space on a memory card, this can result in poor quality images
- Digital pictures can always be reduced in size if they are for small or web-use

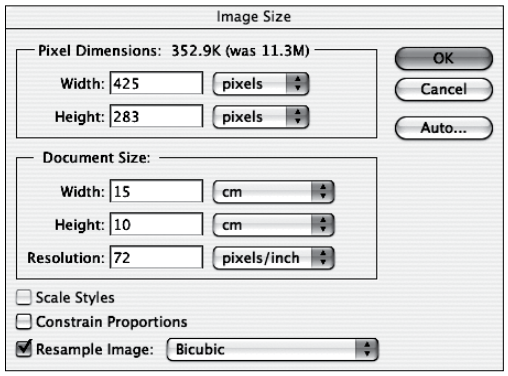
The basic steps for saving a photo for e-mailing or web sites

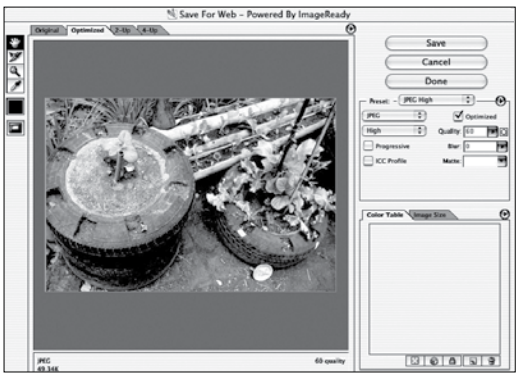
Step 1 - Open the image in Photoshop

Step 2 - On the "Image Menu", choose "Image Size"

Step 3 - Type the size that you want your photo to be seen - for example 10 cm high by 15 cm wide, click ok

Step 4 - Make sure the resolution is set to 72 dpi (pixels/inch)





Step 5 - On the "File Menu", choose "Save for Web", this will open the picture in a new widow like the one shown on the left

Step 6 - Select the JPEG format that you want from the "Preset" drop down menu and click "Save"

Your image is now ready to e-mail...

Using photos to enhance Most Significant Change Stories

Images always help to explain a story. This is why photographs are used in newspaper articles. **Photographs can help to make a story more interesting and help people feel what it is like to be "inside" the story.**

The Most Significant Change Evaluation system described earlier in the chapter can be greatly enhanced through the use of photographs. To do this, either the interviewer and / or MSC participants can use photos to document images that explain or represent the changes described in the MSC stories.

A big advantage of using photographs is that they can help to improve the feedback process. For example:

- Photos taken by participants can help to focus the topic of the MSC story
- MSC Stories posted on a community notice board together with photographs, will make other members of the community more interested in reading the story

Photos taken by Interviewers

Interviewers may choose take photographs to help to explain the Most Significant Change (MSC) Stories they have collected.

Photos taken by Participants

Project participant shows his buffalo

Trainee's new home gardens

Photography can also be a good way to give an opportunity to program beneficiaries to express themselves.

With simple instructions on how to use a camera and a basic training on photography techniques, program beneficiaries can become important visual documenters of the changes that are being experienced either as individuals or in their community.

Program beneficiaries are asked to express through photography what they think represents the significant change experienced. The resulting photographs then become tools through which the MSC stories will emerge.

This "Visual monitoring and evaluation" is both participatory and subjective. This means that it involves everyone in the process while helping to tell the story from the perspective of the participants.

The steps for "Visual Most Significant Change (MSC)"

1) Select the "Visual MSC program participants (photographers) - maintaining a gender balance
2) Train the selected photographers in :
   - how to use the camera
   - basic photography techniques
3) Establish and agree upon a specific time period for the selected participants to take their photographs (could be 2 weeks, 1 month, 3 months, 6 months etc.)
4) After the agreed upon time period, collect the films of the photos taken and print the results (if using standard film cameras) or collect the camera media cards (if using digital cameras) and make prints or digital copies of the digital images
5) Hold a focus group discussion with the participants using the printed photos and / or displaying the digital images. Ask the participants to choose the photographs they think represent the most significant or important changes experienced as a result of the program
6) Using these selected photographs as a tool, ask the participants to explain:
   - Why they took the photo
   - What the photo represents
   - What is the change represented in the photo
   - Why is this change considered to be significant or important
7) As a result of this process you will have a significant change story emerging from the chosen photographs
8) The photographs and story can then be:
   - Posted on a community notice board
   - Shared with the community through a simple publication
   - The photograph shown and the story read at community meetings
   - A series of photographs and stories can also be collected / compiled for a village-based exhibition

This process provides an opportunity for participatory reporting of significant change, which falls outside of the established program goals, outcomes and indicators.

Example of a MSC Photo story

- A man took a photograph of his daughter's wedding and during a focus group discussion choose this photo to represent the most significant change for him.
- **The facilitator was confused because the photo just looks like a normal social photograph.**
- During discussion with the program participant the story emerges... Before the program the man's daughter could not get married because he did not have enough money. But as a result of the Permaculture program, crop diversification opened up new markets for him and his overall family income had increased by 30%. Because of this he could afford to organize his daughter's wedding and that, for him, represented a significant change.

Creative ways to use Visual (Photos) and Audio Visual (Video) Media

Digital photos used as part of a training

Video interviews for MSC Stories

A note about using video for reporting

As with photographs, videos can be a great way to add a lot of interest to a report.

People say that:

> **"If a picture says a thousand words, then a video says a million"**

Videos can add extra dimensions to your visual reports, for example, participants can be interviewed so people can hear their Most Significant Change Stories told in their own words.

However, making an effective video is not easy. It is a very big undertaking and the process of doing so requires time, a range of skills as well as expensive equipment.

Video planning, shooting and editing training is recommended.

If you have video equipment and you are still learning how to use it effectively one good idea is to practice using the equipment by filming yourself delivering trainings and then view the video with a group of friends and associates to self-evaluate what you think you could do to make your facilitation skills more effective.