
Growing for the future A foundation course in sustainable development for Horticulture

Developed by Professional Practice for Sustainable
Development
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(PP4SD) go to <http://www.pp4sd.org.uk>

Acknowledgements

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About PP4SD

PP4SD is an inter-professional learning project on sustainable development. The Council for Environmental Education, the Environment Agency, the Institution of Environmental Sciences and the Natural Step initiated the programme in 1998. WWF became a partner for Phase 1 (1998-2002) of the Project and in the second phase (2002-2005), the Royal Society for the Protection of Birds has joined the Project as a partner.

PP4SD aims to give professionals confidence and competence in dealing with sustainable development issues in their daily practice. In Phase 1 the project held a number of inter-professional workshops that led to:

- a sustainable development framework appropriate for professional institutions to use as a basis for continuing professional development,
- two booklets to promote the ideas and tools available,
- a set of training materials relating to the framework.

In Phase 2 the project partners are continuing with inter-professional learning events and have extended their activities to work with professionals in the financial and land-based sectors. This training programme forms part of the project's activities with the land-based sector.

The Materials

Aims and objectives

The materials aim to provide land-based professionals with the tools to think about sustainable development in a structured way, and in a way that is relevant to the context of the sector. The materials are based on a generic framework, which can be adapted for the different industry groups within the land-based sector, by incorporating different case studies and issues specific to the industry group. This document is an example of how to focus the materials for professionals working in horticulture. The participants on the course will be challenged to put the learning into practice on a personal and a professional level.

The materials are designed to achieve the following objectives for participants:

1. improving awareness of the principles that underpin sustainable development;
2. identifying drivers for change in the land-based sector;
3. being aware of the benefits of applying the principles to land-based enterprises;
4. applying systems thinking to the land-based sector;
5. developing a personal action plan for implementation at work.

The materials are designed to impact on professional practice and they are particularly relevant for key decision makers and those who influence others in the land-based sector. Those involved in training and education within the sector may wish to adapt or incorporate all or parts of the materials into their own work.

The approach

The PP4SD training is based on “facilitated dialogue”, a shared investigation into what sustainable development means within a given context. There is a limit to what can be achieved in presenting information about sustainable development. Individuals have to come to develop their own understanding of the concept, which usually requires a shift in perspective that allows situations and issues to be viewed in a new light. This is not something that can be imposed, but the opportunity for learning and change can be created through the trainer and the participants engaging in dialogue.

This dialogue will lead to an “appreciative inquiry” into the enterprise or organisation in which the participant operates. Appreciative inquiry means focusing on how to use the principles of sustainable development to develop new and positive ways of organising activities sustainably rather than focusing on what is wrong with an enterprise or organisation. Appreciative inquiry seeks to instigate a continued process of questioning and inspiring positive actions.

Contents of the package

- Background information
- Pre-course reading
- Manual
- PowerPoint presentation
- Handouts
 - Case studies
 - Crop production flow diagram
 - Problem solving example
 - Photographs to stimulate discussion

Programme for the day

0930-0940	0:10	Introduction
0940-1010	0:30	Introductory activity
1010-1100	0:50	Changes in the industry
1130-1150	0:20	Joined up practice
1150-1245	0:55	Applying the systems approach
1400-1445	0:45	Problem solving the sustainable way
1445-1550	1:05	Case study review
1610-1640	0:30	Action planning
1640-1700	0:20	Review and close

Introduction

Aim

General introduction to the programme for the day, to the tutor(s) and to each other.

Objectives

- Participants know the purpose, format and style of the course
- Participants feel comfortable with each other
- Participants know about housekeeping arrangements
- Manual and copy of the PowerPoint presentation are handed out

Time required

- 10 minutes

Content and method

- Tutors introduce themselves.
- Run through domestic arrangements and health and safety.
- Confirm the aims for the day.
- Confirm the programme for the day using the slide and ask for any comments or concerns about the programme.
- ¹Invite each participant to introduce themselves, their organisation and their main hope for the day, in particular which area of the horticultural industry they work in.
- Make reference to pre-course reading material.

¹ If more than 7 people, introductions should be done in groups as part of the Introductory Activity

Introductory Activity

Aim

- Move the group towards a common view on sustainable development.

Objectives

- Participants to identify and verbalise their own thoughts on sustainable development.
- To discuss and review ways of perceiving sustainable development.

Time required

- 30 minutes

Content and Method	
<i>(work in groups of 5-7)</i>	
Each participant will need pen and paper, each group flip chart and pens.	
Option 1	Option 2
<ul style="list-style-type: none"> • Each participant to work individually, to think of two examples of activities linked to horticulture. One example to illustrate what they believe to be some element of sustainable development and one example of what they believe illustrates unsustainable development. • Each participant should then write three reasons why they think the first example illustrates sustainable development and three reasons for why the second example illustrates unsustainable development. 	<ul style="list-style-type: none"> • Show one of the images and ask each person to write down two things they think are, and two things they think are not, sustainable about the activity shown in the picture. Alternatively, on a scale of 1-10, how sustainable do you think it is? • Use the background information to answer questions or give further information once participants have given their first impressions. Ask if this alters their perceptions of the activity. • Ask if there are other questions you would like to ask the 'owner'.
Each person presents their ideas to the group and also introduces themselves.	
<ul style="list-style-type: none"> • Each group presents their conclusions to the other groups. • The facilitator records the key points from each reason on a flip chart in three columns, mentally separating them out into "economic", "social" and "ecological" and asks what participants think the three headings are. • Add the headings to the top of each list. • Ask the participants if the lists reflect their view of sustainable development, ask if there is anything they would wish to add. Can they summarise what they believe sustainable development to be? • What is the difference between sustainability and sustainable development? • Present slides illustrating the two terms and ask for comments. • Present slides illustrating the two models of sustainable development and ask for comments. 	

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|--|
| <ul style="list-style-type: none">• Is there a conflict of interest between economically viable development and sustainable development? |
| <ul style="list-style-type: none">• Conclude by agreeing a common view of sustainable development at least for the purposes of the training session – say 5 key features/principles. |

Changes in the industry

Aims

- To consider the implications of changes in society and business for the horticultural industry.

Objectives

- To identify changes within and without horticulture that are impacting on the way the business is managed.
- To identify the main ways the business might need to respond.

Time required

- 50 minutes

Content and method

- Participants look back over past 50 years and list major changes in the horticultural industry and then suggest the major causes of those changes.
- Participants are asked what they understand by the term “Drivers for Change”.
- An example of a driver for change is provided – government policy on food. Participants consider the implications of this – social, economic and environmental, for the horticultural industry.
- Further slides on population growth, water consumption and food retailing are presented followed by one on corporate social responsibility. These slides seek to broaden the context in which horticulture is perceived to operate.
- The Participants work in groups to consider the questions (*they can use a table like the one below*).
 1. What will be the major changes in your work over the next 20 years?
 2. What are the causes of those changes (drivers for change): Internal to horticulture? External to horticulture?
 3. What are the implications for sustainable development and you in your employment?
- In plenary, the participants try to prioritise the strategic changes that horticulture should be making.

Example for responses

Driver	Change/ Response	Implications for SD	Implications for industry
Convenience food Adding value and profit to a commodity	Ready packed salad	More packaging, more processing, use of chemicals to wash salad	Expanding market, increasing profit, more employment
Healthy eating	More fresh fruit and vegetables needed	Less processing, less packaging, more energy for cooling,	Greater productions, keeping foods

		faster transport needed	fresh, faster transport
Growing interest in visiting the countryside	More visits to gardens and parks	More employment and training, greater use of chemicals, restoration of heritage landscapes, greater car use	More education and training in amenity horticulture,
Higher energy costs	More seasonal crops Fewer visits to parks and gardens	Reduction in CO ² emissions	Higher employment of seasonal workers

Joined up practice

Aims

- To explore the value of a systems approach to developing strategies for the sustainable development of horticulture.

Objectives

- To be aware of the meaning of the term 'systems thinking'
- To define a system
- To know about two different models developed to assist the application of a systems approach to the business of horticulture.
- To apply systems thinking to a specific horticultural topic/issue.

Time required

- 20 minutes

Content and method

The challenge: To join up thinking across professional boundaries so that development in one area does not adversely affect activities in another. For example, during the foot and mouth disease outbreak, access to the countryside was restricted. Many of the companies using shire horses for forest management became bankrupt and closed down.

The two principles:

- Everything affects everything else.
- There is no such thing as a free lunch

<p style="text-align: center;">Option 1</p> <ul style="list-style-type: none"> • There is 15 minute presentation on systems thinking that introduces the concept and the models developed to assist the application of systems thinking to business. • Introduction to the 5 capitals model 	<p style="text-align: center;">Option 2</p> <ul style="list-style-type: none"> • Take a changed horticultural activity, eg irrigating crops, reducing use of fertilisers. Consider: Has it achieved its objective? What else has it ‘achieved’? For example, use of fertilisers increases yield, but can lead to drinking water contamination. • Each group selects a different consequence of this action. The group then looks for a consequence of that and so on, drawing it as a diagram. • Each group makes a brief presentation relating their findings to sustainable development.
	<ul style="list-style-type: none"> • There is a short presentation about the concepts and models of systems thinking, explaining that models are used to provide a systematic means of analysing actions and consequences. Focus on 5 capitals model.
<ul style="list-style-type: none"> • Questions and further discussion followed by the application of what has been learned to the Product Mapping Activity. 	

Applying the systems approach

Aims

- To analyse an activity using the systems approach.
- To apply the Five Capitals model.

Objectives

- To analyse a flow diagram of the production and/or consumption of a horticultural product.
- To identify changes in the Five Capitals.

Time required

- 55 minutes

Handout

- For Option 2 see separate resource sheet for Crop Flow Diagram.

Content and method	
<p style="text-align: center;">Option 1</p> <ul style="list-style-type: none"> • Divide participants into groups of four or five and provide a flipchart paper and pens. • Ask each group to select a horticultural product, e.g. a poinsettia grown in peat-free compost in a plastic pot; or a salad, vegetable crop; or it could be an input such as compost or fertilizer. • Ask each group to create a flow diagram for the product, showing the inputs and outputs and to identify examples of the Five Capitals in the production and the consumption process and decide whether the capital has increased or decreased. Use the example in the PowerPoint slides to illustrate what is required. • Plenary session where each group presents their diagram. • General discussion – What are the benefits of recognising the Five Capitals in a process? Can individuals apply the Five Capitals to their own contexts? 	<p style="text-align: center;">Option 2</p> <ul style="list-style-type: none"> • Provide each participant with a Crop Production Flow Diagram handout. Explain the structure of the diagram relates to the crop growing protocols in the Assured Produce scheme. • Ask participants to work in groups to identify the potential for improving sustainability at each stage of the flow diagram. They can do this for a specific crop or on a generic basis. • Each group should then discuss if their recommended actions at each stage increase or decrease any of the Five Capitals. • Plenary session where each group presents ideas for improving sustainability at each step. • General discussion on the benefits of using the Five Capitals model. • Inform participants that they can see of crop specific protocols as recommended by the Assured Produce scheme at www.assuredproduce.co.uk

Problem solving the sustainable way

Aims

- To apply sustainable development principles to solving a specific horticultural issue or practice, eg food miles, use of non-renewable resources, energy in / energy out balances.

Objectives

- To work through a practical problem in a structured way to reach a sustainable solution.

Time required

- 45 minutes

Handout

- See separate resource sheets for problem solving analysis.

Content and method	
Option 1	Option 2
<ul style="list-style-type: none"> • Participants work in groups and have a number of photographs or illustrations that suggest an issue or problem and select one of them. • They agree what the issue is that needs resolving and agree how they might resolve it traditionally and compare this with how they would resolve it if they applied sustainable development principles. (They can use any of the models presented in the course as a guide, another or their own). 	<ul style="list-style-type: none"> • Hand out and go through the sheet and example 'Problem and Solution Analysis' using the supporting slides. • Each group selects a horticultural problem and uses the methodology to identify a solution. • Look at the solutions in terms of the 5 capitals. • Review the solutions and identify where you could intervene to help bring about the solution.
<ul style="list-style-type: none"> • Each group makes a short presentation of their conclusions. 	
<ul style="list-style-type: none"> • The facilitator summarises the differences between the two approaches and how far sustainable development figured in their discussions. 	<ul style="list-style-type: none"> • The facilitator asks questions to find out how useful participants found the methodology and asks how far sustainable development figured in their discussions.

Case study review

Aims

- To illustrate the application of sustainable development principles to horticultural practice.

Objectives

- To analyse a case study of horticultural practice and answer specific questions about it.
- Present conclusions to others.

Time required

- 1hr 5min

Handout

- Case studies

Method and content
<p>Timing</p> <ul style="list-style-type: none"> • 25 minutes to read, discuss and prepare feedback • 25 minutes for feedback and discussion • 15 minutes to discuss how this relates to the work situation <ul style="list-style-type: none"> • All the case studies are relevant to horticulture and follow a similar format. • Participants work in groups, each group studies a different case study and answers the specific questions. <p><i>Summarise the background to the case study</i> <i>What are the main sustainable development aspects of this case study?</i> <i>Are there elements of good practice that could be shared and replicated?</i> <i>How could the enterprise in the case study be made more sustainable?</i> <i>Any other comments.</i></p> <ul style="list-style-type: none"> • The group presents their conclusions to the other groups. • In plenary the participants draw out and list the common success factors and also comment on the relevance of that case study to their own situation.

Case studies

1. Birds Eye Walls – Peas
2. B&Q
3. Pertwood Organics
4. The Royal Parks

Action planning

Aims

- To make horticultural practice more sustainable.

Objectives

- To identify personal spheres of concern and spheres of influence.
- To identify actions that can be taken within one's sphere of influence.
- To identify the main changes that need to happen in the sphere of concern to enable horticulture to become more sustainable.

Time required

- 30 minutes

Method and content
<ul style="list-style-type: none">• The 'sphere of concern, sphere of influence' diagram is presented and explained. While we may be interested or concerned in many issues, we are limited in what we can do. However, where we are able to make a difference, our sphere of influence, we can plan our actions.• The participants work in groups to consider if they think the topic is important to horticulture, and why or why not.• They then reflect on their own work and identify the most important area of work in which they can make changes. They then identify 3 things that they can do/start doing to contribute to this agenda and talk them through with a colleague. Actions should be challenging but achievable.• The actions are written on self-addressed post cards and handed in. They will be sent to the participants after three months to remind them of the actions they agreed to take. A response will be asked for.• To help you do the things you have identified: What should others do more of? What should others do differently? What are your CPD requirements to do these things?

Finale / evaluation

Aims

- To assess the impact of the course on the participants
- To have feedback on how the course might be improved

Objectives

- Participants can list how their capacity to integrate change for sustainable development into their professional work has developed during the course.
- Participants reflect on the course and suggest amendments.

Time required

- 10 minutes

Content and method

[As with any course we would recommend an evaluation at the end of the day. PP4SD would be very pleased to receive any comments or feedback on the use of all or part of these materials. Send them to info@pp4sd.org.uk]

We recommend preparing an evaluation sheet that is appropriate to your group. Use this sheet to collect information about the course in general, the individual sessions and the impact the course has had on them.

To help participants reflect on the course, ask the following two questions that return them to their perceptions at the start of the course. Ask individuals to feed back to the group.

- Is this topic more or less important than you thought at the start?
- What would you change to your feedback from the first activity?

Review

Handout

- Evaluation form

For the pilot courses, participants will complete a detailed evaluation form to help the authors modify the content and approaches used. In the final version a much shorter evaluation form will be used to provide feedback to the presenter.