



Strategic Thinking and Planning in Civil Society Organisations Course Toolkit

Cyprus
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Introduction – About the Toolkit

This Strategic Thinking and Planning in Civil Society Organisations Course Toolkit has been produced as part of the broader **Cypriot Civil Society Strengthening Programme** implemented by **INTRAC** (International NGO Training and Research Centre) www.intrac.org, UK, The Management Centre www.mc-med.org and NGO Support Centre, www.ngo-sc.org, Cyprus.

This toolkit is intended for use by Cypriot CSOs – we hope you find these materials useful – please let us know if you have any feedback!

Course Objectives

- Define different ways of thinking creatively and strategically
- Explain different approaches to strategic and creative thinking
- Apply tools in strategic and creative thinking
- Understand and appreciate environmental context for strategy development
- Apply models and tools in strategic planning

Glossary of Key Terms

Thinking	<ul style="list-style-type: none"> - To have a particular opinion, idea or belief in something - To use ones mind actively to form connected ideas
Creative Thinking	<ul style="list-style-type: none"> - The use of ideas or imagination to create something - Opening of the mind to consider all possibilities - Changing thinking to change actions
Approaches	<ul style="list-style-type: none"> - ideas or actions intended to deal with a problem or situation: "his approach to every problem is..."
Risk	<ul style="list-style-type: none"> - Creativity requires thinking differently which can be risky, some people may be threatened or nervous about 'thinking outside the box' which may lead to failure
Problem focused approach	<ul style="list-style-type: none"> - Think clearly about a problem - Generate options - Think critically to select best option
Vision focused approach	<ul style="list-style-type: none"> - Building on past successes, developing confidence and inspiring a vision for a better future
System	<ul style="list-style-type: none"> - A set of elements joined together to make a complex whole
Systems thinking	<ul style="list-style-type: none"> - A powerful problem-solving tool - Simplifies complexity in different ways but focussing on understanding the whole not on detail - Captures flow, movement and dynamics
Rich Picture	<ul style="list-style-type: none"> - Drawing a picture to map human systems which involve multiple relationships, providing a rich amount of information in easily digestible form
Strategic thinking	<ul style="list-style-type: none"> - Having a vision for the future rooted in an understanding of the past, understanding the bigger picture, understanding what is happening on the ground, challenging conventional wisdom whilst constructing a future that might be
Changing environment	<ul style="list-style-type: none"> - The independent and autonomous role of NGOs is dependant on an environment that is conducive to their development. In recent years donor harmonisation proposals and the Counter terrorism measures have all changed the environment within which NGOs are functioning
Strategy Formation	<ul style="list-style-type: none"> - A focused strategic planning process designed to enhance overall performance and improve capability of delivery in a rapidly changing NGO environment
Intended strategy	<ul style="list-style-type: none"> - Refers to strategic goals
Deliberate Strategy	<ul style="list-style-type: none"> - Those intentions that actually happened in practice

Unrealised strategy	- Intentions which for whatever reason were never translated into action
Emergent Strategy	- Organisational responses to changes in the external environment which were not anticipated, which created opportunities
Realised strategy	- The combination of the deliberate strategy and emergent strategy and actually implemented
Strategic Learning	- Recognition by managers of the importance of learning from experience of what happened and why in order that future intended strategies can be better formulated

Session One

Home Group Responsibilities

You will be a member of a home group for the duration of the workshop

Home group members should agree a name for their group

During each day the home group members should check with each other to ensure that no-one is experiencing language or other practical problems. If they are, these should be raised with the facilitator

At the end of each day, each home group should meet for 15 minutes to discuss the following:

- What went well today?
- What could have been better?
- Suggestions for the remainder of the workshop

Each Home Group should select one member to represent the group's views to the facilitators at the End -of- Day Review meeting. This meeting will take approximately 15 minutes. A different representative should be selected each day.

Time keeping

In addition on a rota basis, each of the home groups will have the responsibility for ensuring that facilitators and participants keep to time during the sessions and breaks.

Review

On the morning following your groups 'duty day', group members will be expected to start the day with an energiser exercise and provide a participatory review of the previous days learning. The review should be fun, involve all participants and take no more than 10 minutes.

	Wednesday	Thursday	Friday
Energiser and review of previous day		Group 1	Group 2
Time keeping	Group 1	Group 2	Group 1
End of day home group	All Groups	All Groups	
Review meeting with Facilitator	One representative from each group	One representative from each group	

Session Two

Readings

1. What is thinking?

- To have a particular opinion, idea or belief about something
- To use one's mind actively to form connected ideas

Left Brain vs. Right Brain

How our minds work – left brain/right brain

- Left brain – logical, rational and sequential thought - 'hard' approaches based on brains ability to analyse
- Right brain – intuitive, emotional and associative processes – 'soft' approaches based on the brain's ability to be intuitive

Creative Thinking

As civil society develops in different regions around the world, unpredictable and frequently unfavourable environments represent major challenges to the diverse civil society organisations (CSOs) that are emerging in this sector. They are required to respond within contexts of political and economic instability and to the upheavals brought about by crisis and conflict. CSOs are also required to adapt to new bodies of knowledge and development targets, whether this is gender mainstreaming, participation, HIV/AIDS or the Millennium Development Goals (MDGs), even if these are not part of their mission and may be beyond their existing capacities.

Organisations need a creative approach to handle increasing complexity

Creativity can enable you to see beyond the accepted, usual, normal ways of acting and behaving – in order to find a better, more effective way of achieving the results you need.

Creativity involves

- The use of ideas or imagination to create something
- Opening your mind to consider all possibilities
- Changed thinking leading to changed actions

2. Approaches to creative thinking

Edward de Bono- Six Thinking Hats

We have said that unstructured thinking can be emotional, confusing and unhelpful. Without a framework, creative thinking jumps around, and it is difficult to reach a resolution. Edward de Bono's 'Six hats' thinking systems argues that there are other ways of thinking that can, with discipline, be used effectively and in a more creative way than the classical adversarial approach. It suggests that there are six basic types of thinking represented by six coloured hats. Each mode, type or hat can be used at different points in a thinking process to limit the boundaries of thought.

Each of the colours of the hat has some connection to an image to aid memory of the type of thinking. The six hats are as follows (De Bono E, 1991):-

White Hat



White suggests paper. The white hat concerns information. When we wear the white hat, we ask the following kinds of questions: 'What **information do we have?**'; 'What **information do we need?**'; 'What **question should we be asking?**' The white hat is used to direct attention to available or missing information.

Red Hat



Red suggests fire and warmth. The red hat is to do with feelings, **intuition, and emotions. You may not know the reasons why you like something**, or why you do not like something. When the red hat is in use, you have the opportunity to put forward your feelings and intuitions without any explanation at all. Your feelings exist, and the red hat gives you permission to put those feelings forward.

Black Hat



This is probably the most useful hat. It is certainly the hat that is most often used. Black reminds us of a judge's robes. The black hat is for **caution. The black hat stops us from doing things that may be harmful.** The black hat points out the **risks**, and why something may not work. Without the black hat we would be in trouble all the time. However, the black hat should not be over-used, as over-caution may be dangerous.

Green Hat



Green suggests vegetation, which **suggests growth, energy, and life**. The green hat is the energy hat. Under the green hat, you put forward **proposals and suggestions and propose new ideas and alternatives**. Under the green hat you suggest modifications and variations for a suggested idea. The green hat allows you to put forward possibilities. When the green hat is in use, everyone makes an effort to be creative.

Blue Hat



The blue hat is for **looking at the thinking process** itself: 'what should we do next?'; 'what have we achieved so far?' We use the blue hat at the beginning of a discussion in order to define what we are thinking about, and to decide what we want to have achieved at the end of our thinking. The blue hat may be **used to order the sequence of hats** that we are going to be using, and to summarise what we have achieved.

Yellow Hat

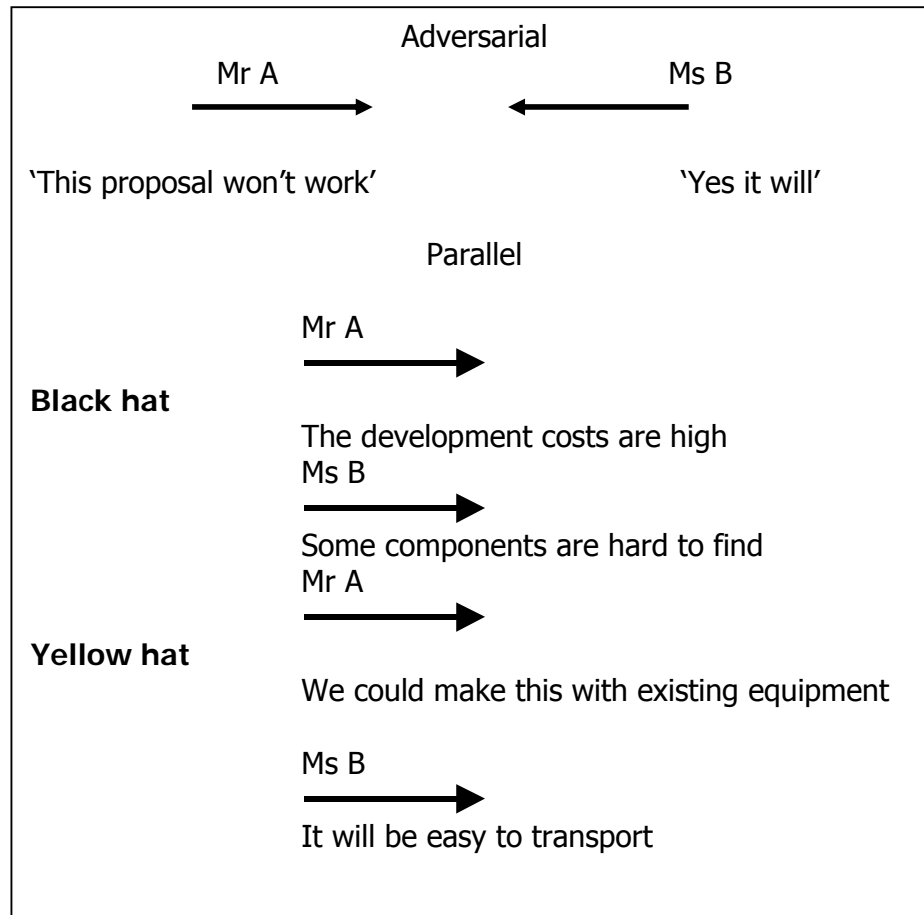


Yellow suggests **sunshine and optimism**. Under the yellow hat we make a direct effort to find the values and benefits in a suggestion: 'What is good about this?' Even if we do not like the idea, the yellow hat **asks us to seek out the good points**. 'Where are the benefits?'; 'Who is going to benefit?'; 'How will the benefits come about?'; 'What are the different values?'

A classical approach to thinking based on argument and critical thinking has its roots in the Greek philosophers, Socrates, Plato and Aristotle who were to differing degrees, responsible for the way our thinking still happens as they based their arguments on the ideas of the search for 'truth' and logical explanations (thesis – antithesis – synthesis). Western approaches to argument remain heavily influenced by the adversarial approach 'is - is not' arguments where the main aim is to prove the other side wrong.

The Six thinking hats approach is based on the idea of **parallel thinking** that allows a subject to be opened up to new creative thinking rather than arguing between two existing possibilities. Another difference between critical and parallel thinking is that it encourages thoughts to be presented in parallel to other people's thoughts rather than attacking the other view. It can serve to move away from arguments resulting in conflicts of opinion and by wearing the different coloured hats the issue can be explored more fully.

Comparing adversarial with parallel thinking



In six hats thinking, different colours are used to represent thought processes as follows:

Colour	Type of thinking	Types of questions
Blue	Managing the thinking process	Sets the agenda, timing Decides on the next step Keeps focus Handles requests Keeps discipline in using the hats Summarises/ concludes Asks for decisions
White	Information available and needed	What information is available? What information would we like to have? What information do we need? What information is missing? Can report on someone's feelings
Red	Intuition and feelings	Feelings Emotions No explanation is given
Black	Caution, difficulties, problems	What could be the problems?
Yellow	Benefits and feasibility	What are the benefits? Is there a potential value?
Green	Alternative and creative ideas	What are the alternatives? Are there other ways of doing this? What will overcome the problems? What are the possibilities?

While the hat thinking may seem to be too separate, an advantage of this 'discipline' is that it is seen to take the discussion away from the ego. People can be asked to think with different hats, so even those who may find one of the hats is closer to their 'natural' response the request to perform a task with a different hat can be made. Maintaining the discipline of describing the hats by their colour is important to this as it de-personalises the request e.g. asking someone to move from their critical/negative approach to think about alternatives should be done using the colours. This way you are able to accept the 'black hat thinking' and move on to the green hat where new ideas and alternatives can be explored. By using the different colour hats, it will also serve to raise awareness about different modes of thinking, and what occasions are they most useful for.

Using the hats

When using the hat model there are a number of key points:-

- Putting on and taking off the hats (metaphorically) enables a thinker to be able to switch roles.
- The hats are not meant to put people into categories. It is totally wrong to say, 'she's a green hat thinker' or 'he only uses the red hat'.
- The purpose and value of the six hats method is to get people to use all six modes of thinking.
- Hat thinking can detach your ego from the thinking. De Bono suggests that "our egos get attached to an idea or an argument. We cannot stand back in order to be objective".
- Hat thinking is particularly useful for an argumentative culture.

Session Three

Creative Thinking Exercise

Assume you are a group of young women in Cyprus that for some time has been thinking about helping other young women to improve their health status. One of you has received an urgent call from UNDP advising that there is some money available to provide health education for young people in Cyprus. The funds however will only be provided to organisations not individuals. You are also advised that any future funding will depend on this new reality. You have called for an emergency meeting of your group to make a decision on the future in terms of whether you will or will not establish an NGO. Using the six thinking hats as a tool, you are expected to deal with this unexpected development that will have far reaching consequences for all members of the group.

Session Four

Problem Focused Approaches

Problem Focused Approaches can help you to:

- Think clearly about a problem
- Generate the maximum number of options
- Think critically to select the best option
- Develop a creativity culture in your team or organisation

One way to do this is to CREATE:

- **Confirm** – to really understand the problem in order to come up with the right solution

[Exercise: Brainstorm on the ways in which you have tried to really understand the root cause of a problem. Have these been effective? Introduce Fishbone diagram if necessary – hard thinking. Can also use metaphors, stories – soft thinking.]

- **Risk** – creativity requires thinking differently which can be risky. People could reject your ideas or be threatened by them. Others may feel nervous about 'thinking outside the box' or about the possibility of failure. Give yourselves the freedom to take risks and possibility to fail.
- **Expand** – this requires the ability to generate a large number of ideas and options instead of always going for the most obvious solution. (brainstorming).
- **Analyse** – once there are a variety of options these need to be filtered, assessed and the best ones selected.
- **Think** – over the longer term organisations will need to build personal capacities to think creatively.
- **Encourage** – the ability to think creatively needs to be encouraged throughout the organisation by nurturing a culture of creativity.

The Fishbone Diagram

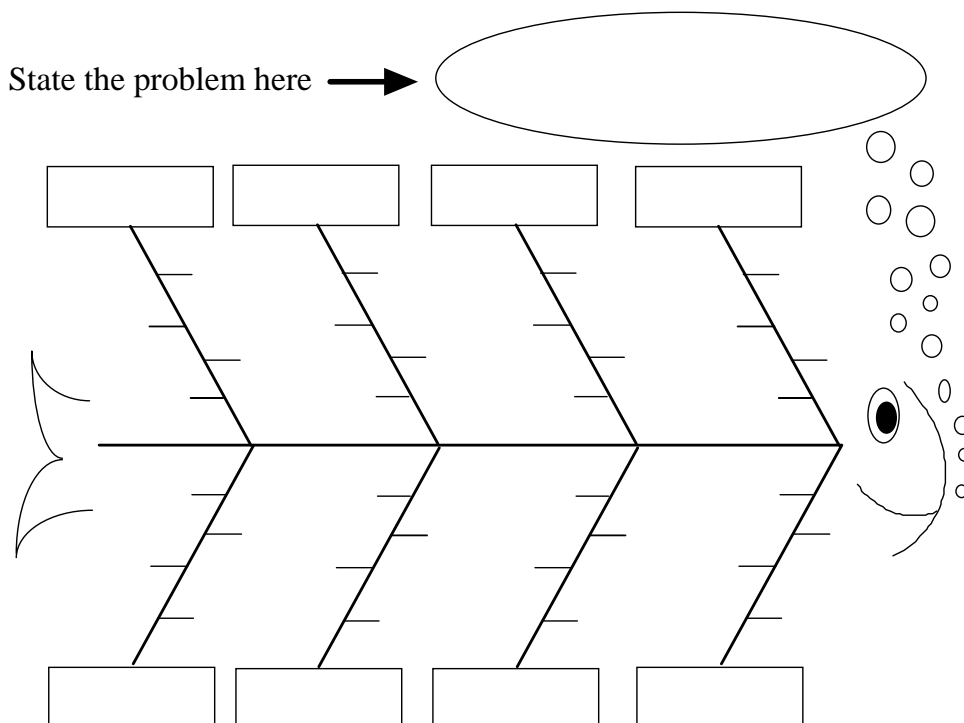
Problems and their causes can sometimes appear vast, unmanageable and insoluble. The Fishbone Diagram (also called the Cause and Effect Analysis) is a technique for identifying the possible root causes that make up a complex problem.

The Fishbone Diagram can allow you to:

- Break a problem down into its constituent parts and contributing causes – but also see the whole picture before trying to solve a single piece.
- Show the relationships between problems and more fundamental root causes.
- Discuss and agree on a common understanding of the situation with all those involved.

The key steps are:

- Start by naming the problem or 'effect' of the issue and write it in the large bubble.
- Draw the angled ribs and write each in one of the square boxes an aspect of the problem which represents a major cause of the problem.
- You can add another level by creating smaller bones to add to each rib – these being the causes of the causes.
- Finally, discuss all the issues, look for relationships, causal factors etc.



Vision Focussed Approaches

Guided visioning exercises have become popular in many fields as a way of defining and achieving a desirable future. It seems that we are more likely to reach an objective if we can see it, and can imagine the steps to reach it.

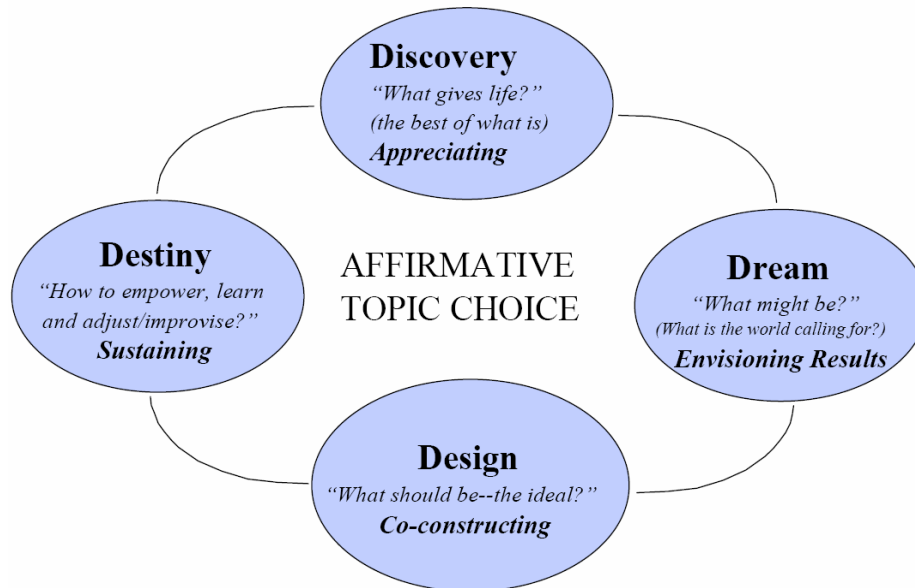
Instead of focussing on problems, which can be negative and disempowering, people are encouraged to build on the confidence of their past successes, and be inspired by a vision of a better future. In this way people are better able to take up the many challenges that they face in their day-to-day lives.

One drawback is that sometimes visioning can lead to poor results because people can't want what they don't know.

One method that has been used with some success is Appreciative Enquiry.

Appreciative Enquiry is about the co evolutionary search for the best in people, their organisations, and the relevant world around them. In its broadest focus, it involves systematic discovery of what gives 'life' to a living system when it is most alive, most effective, and most constructively capable

Creating a Positive Vision –



Appreciative Inquiry "4-D" Cycle

Appreciative Enquiry

(Adapted from The Positive Path: Using Appreciative Inquiry in Rural Indian Communities)

Appreciative Enquiry is a strategy for purposeful change that identifies the best of 'what is' to pursue dreams and possibilities of 'what could be.' It is a cooperative search for the strengths, passions and life-giving forces that are found within every system - those factors that hold the potential for inspired, positive change.

There are four stages to appreciative enquiry that form a continuous cycle known as the '4 Ds': *Discovery, Dream, Design, and Destiny.*

The Discovery Stage is about discovering the best of 'what is'. It involves exploration and appreciation of current strengths and existing capacities. This may be achieved by facilitating storytelling about peak experiences within a group, and the organisation or community in which the group exists. Through an analysis of their individual stories, people identify the enabling conditions that existed when past achievements occurred. This focuses on discovering positive capacity. The group then enters the:

Dream Stage in which they challenge themselves to imagine 'what could be'; a future in which their group functions at its absolute peak, achieving its goals and contributing to the development of its surrounding community. They develop a vision, a powerful purpose and a compelling statement of strategic intent, and form specific action plans to reinforce their strengths and fulfil their dreams in the:

Design Stage. With a better understanding of their strengths and core values, a clear vision of 'what should be', and specific strategies for how to obtain the future they desire are developed. They then move on to the final stage, the:

Destiny Stage, in which they implement their action plans and work towards sustaining their strategies and mission. In this stage, they also explore ways to learn, adjust, and improvise to approach their ideals and become empowered.

Thinking Creatively

Organisations tend to interpret their own realities by defining both the area of work they will focus on and how that work will be conducted. The danger is that this may limit the organisation to old and ineffective ways of working and/or to conforming to received and perhaps inappropriate models. The development of analytical capacity is a way of fostering alternative ways of interpreting the world, which perhaps fit better with the reality observed. An important example of how such a 'paradigm shift' in development thinking has affected the ways agencies work is Amartya Sen's work on freedoms, entitlements and capabilities²², which shifted the emphasis of human development from a concentration on economic growth to recognition of wider influences on human well-being.

At individual or organisational levels, there can be similar 'paradigm shifts' where real insights can be derived from careful consideration, sharing of realities and creatively rethinking the frameworks which describe these realities. For example, indigenous coffee producing co-operatives in Mexico were vulnerable to the fluctuation of world coffee prices and to the exploitative prices paid by the middlemen, or coyotes. However, with the help of external advisors, one co-operative began to analyse the situation differently. As a result of a market analysis they realised that they could reduce their vulnerability and increase their income by by-passing the middlemen and finding new markets for their coffee. This led to the establishment of a very successful chain of urban coffee shops which increased the income received by the co-operative by 1) adding value to the coffee beans and 2) creating a national market for coffee that had barely existed previously.

Praxis Paper No. 7: *Building Analytical and Adaptive Capacities for Organisational Effectiveness*
By Mia Sorgenfrei and Rebecca Wrigley 2005 (INTRAC)

Session Five

Exercise

1. Exercise - taking any organisation as an example use one of the approaches to develop a strategy to tackle a development issue in one of its programmes.
2. Reflect on the results of the two approaches. Are these mutually exclusive approaches?

Session Six

Readings

1. Thinking in systems

What is a system?

System: Set of elements joined together to make a complex whole.

Reductionist vs. Systems Thinking?

Picking up on the previous discussions on hard vs. soft thinking and problem vs. vision focussed approaches we will now introduce two very different ways of thinking:

- **Reductionist Thinking:** Complexity is simplified by breaking down an issue into parts until the resulting parts are simple enough to be understood and analysed. It is hoped that addressing these parts will then have an impact on the wider issue. Useful for 'hard' systems like computers or engineering.
- **Systems Thinking:** simplifies complexity in a different way but focussing on understanding the whole not on the detail. This pays attention to towards capturing flow, movement and dynamics - vertical, horizontal and circular – and on the inter-relationships. Useful for 'soft' systems like human-activity systems. Provides framework within which most participants can agree.

Throwing a Stone and a Bird

When throwing a stone do you know where it will land?

A stone's trajectory can be predicted quite accurately using the laws of mechanics...

When throwing a live bird do you know where it will land? Why not?

A bird is much less easy to predict – unless of course you tie it to a stone! – but then you are destroying its capability as a bird.

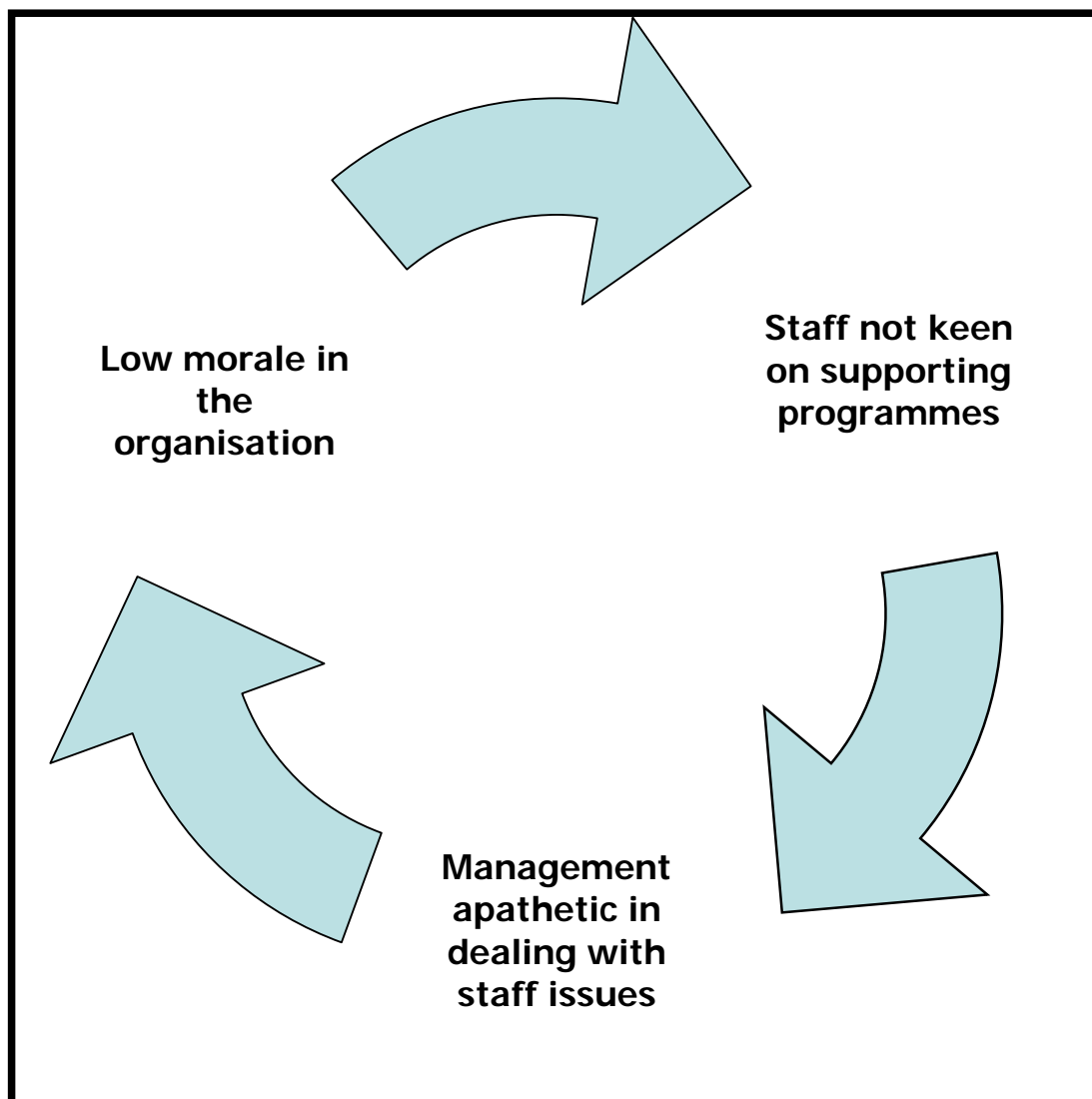
Systems Thinking a powerful problem-solving tool.

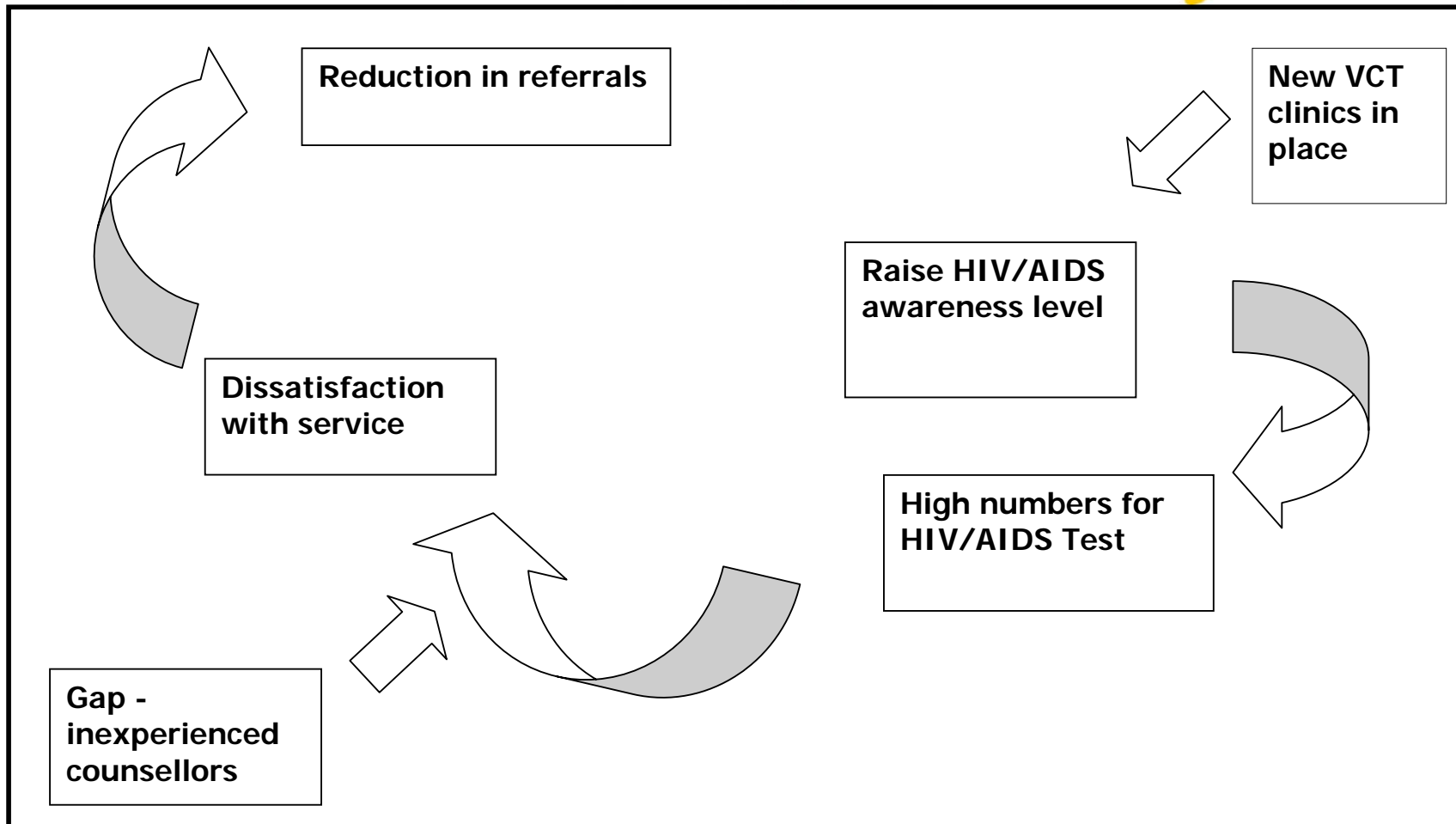
System – a perceived whole whose elements 'hang together' because they continually affect each other over time and operate towards a common purpose. It's about bringing as many perspectives as possible to understand a complex system.

Systems structure - is the pattern of interrelationships among key components of the systems- include hierarchy and process flows, attitudes, and perceptions of the quality of the product, the way in which decisions are made etc.

Tools of Systems Thinking causal loop diagrams - looking at the interrelatedness of forces, and seeing them as part of a common process

Loops in Systems Thinking. Reinforcing loop – generates growth (understanding of an issue) or collapse.





Peter Senge et al (1994) *The Fifth Discipline Fieldbook: Strategies and Tools for Building a Learning Organisation*
Nicholas Brealey Publishing Limited, London

2. Human systems

Human systems are living organisms. They are more than just delivery systems or pieces of performance machinery. They come to life. They have an identity, a memory, patterns of behaviour, disabilities, a life span and in most cases, death.¹ Their behaviour can be understood partly as an outcome of the workings of feedback loops where variables are interrelated.²

Complex systems can behave in **non-linear** ways and produce escalating levels of **unintended consequences** through spontaneous self-organisation.

Effects of small changes in a system can cause, through feedback loops and multiplying effects, large changes in the system. That is, the components of the system cannot be separated in a reductionist way because the qualities of the system depend on the richness of the interconnections.

Emergent Properties of Systems

One of the key ideas in Systems Thinking is that of emergence.

Emergent properties:

- Coming into being
- Arising as an effect of complex causes and not analysable simply as a sum of their effects

Emergent properties of a system do not arise from the nature of the parts that make up the whole. **Such properties are the outcome of overall system behaviour or synergy.** Emergent properties come from the **dynamism of the interrelationships** within the system. Such properties exist in all systems. The challenge is not so much to build or enhance them as it is to unleash them or find ways to encourage their emergence.

Why is this useful in development programmes?

As with organisms within a natural ecosystem, organisations operate as open systems that **respond to environmental changes** and **co-evolve** with them in order to survive

¹ Most estimates of the life span of commercial companies ranges from 12 to 40 years. Most die of learning disabilities.

² The working of feedback loops is a key part of systems thinking. This includes negative and positive feedback.

Systems Thinking tries to get people to see the bigger picture. This can help to:

1. Understand the bigger system and the part they play in it i.e. see their impact on others, others impact on them and the connections between them.
2. Understand the time dimension – i.e. focus on the past, present and how these impact on the future.
3. Understand the crucial role of relationships in systems performance.
4. Open their eyes to process dynamics i.e. the way the system actually works.

Understanding systems can help us to accept how unpredictable our work can be and therefore to explore both the possible intended and unintended consequences.

Critical Systems Thinking

Critical Systems Thinking is inspired by the Freirian preoccupation with social transformation and empowerment. The approach draws on the life experiences of different actors and includes relevant stakeholders in a collective process of reflection and negotiation for decision-making¹⁶. This process raises issues of power but also an awareness of the biases between alternative perspectives by exploring:

- **In whose interest** knowledge is produced
- **Who benefits** from maintaining or changing existing mental models or systems of belief

Organisations practising this type of approach can develop a more conscious understanding of the role they play, and wish to play, in the systems of which they are part. They can also explore how they want to influence their surrounding environment and therefore be in a better position to envisage scenarios for their active engagement in social transformation (for example, having an influence over those relationships that exclude, diminish and disempower some actors in society and reinforce those in a powerful position). This developmental practice helps those actors with less power to consciously get involved in influencing the world and their place in it, rather than simply responding to existing frameworks.¹⁷

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2005

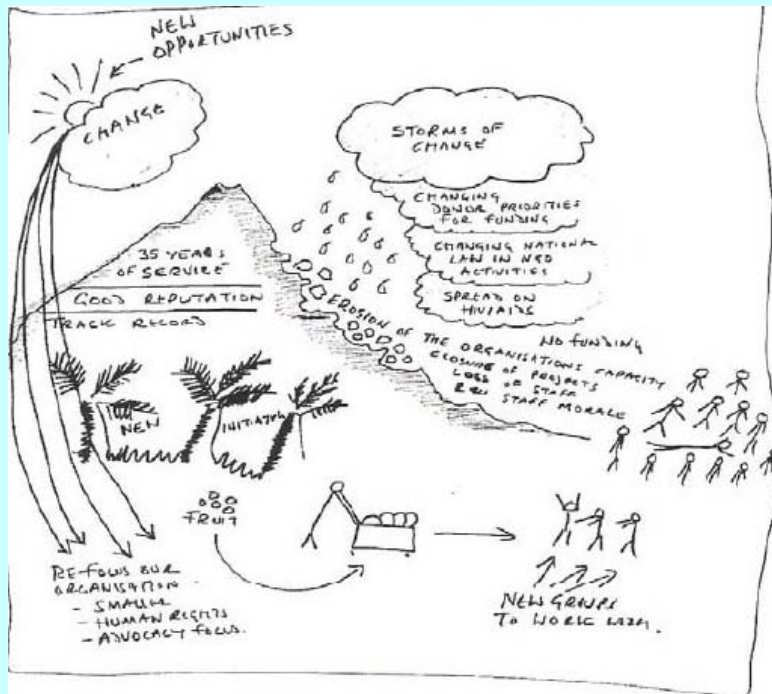
Mapping a System using Rich Pictures

Drawing a Rich Picture is one way of mapping human systems which involve multiple relationships. Drawing pictures can be a better medium than writing for expressing these complex relationships because pictures encourage a more dynamic and holistic representation of a situation – in short they can provide a rich amount of information in an easily digestible form. In the example of farmers in Turkey given above this may have highlighted the multiple uses of barley and how altering one use can affect another.

A Rich Picture expresses how an individual or group sees a particular situation. The pictures can explore factors in the wider environment, identify issues, problems or concerns and even represent them as metaphors. Pictures therefore allow people to express their ideas creatively, for example:

- As an organogram or organisational drawing – which with lines, bubbles, broken lines, circles etc. represents the nature of relationships
- As a collection of different smaller drawings representing different elements of the situation

The following Rich Picture came from an INTRAC training course in 2003 where it was used as a group-based activity. This involved an individual identifying an organisational issue that they wanted to share with the rest of the group, in order to get their input and advice.



Chaos Theory

Chaos Theory: In a scientific context, the word *chaos* has a slightly different meaning than it does in its general usage as *a state of confusion, lacking any order*. Chaos, with reference to *chaos Theory*, refers to an apparent lack of order in a system that nevertheless obeys particular laws or rules; this understanding of chaos is synonymous with *Dynamical Instability*, a condition discovered by the physicist Henri Poincare in the early 20th century that refers to an inherent lack of predictability in some physical systems. The two main components of Chaos Theory are the ideas that systems - no matter how complex they may be - rely upon an underlying order, and that very simple or small systems and events can cause very complex behaviours or events. This latter idea is known as *Sensitive Dependence on Initial Conditions*, a circumstance discovered by Edward Lorenz (who is generally credited as the first experimenter in the area of chaos) in the early 1960s.

Lorenz, a meteorologist, was running computerized equations to theoretically model and predict weather conditions. Having run a particular sequence, he decided to replicate it. Lorenz re-entered the number from his printout, taken half-way through the sequence, and left it to run. What he found upon his return was, contrary to his expectations, these results were radically different from his first outcomes. Lorenz had, in fact, entered not precisely the same number, .506127, but the rounded figure of .506. According to all scientific expectations at that time, the resulting sequence should have differed only very slightly from the original trial, because measurement to three decimal places was considered to be fairly precise. Because the two figures were considered to be almost the same, the results should have likewise been similar. Since repeated experimentation proved otherwise, Lorenz concluded that the slightest difference in initial conditions - beyond human ability to measure - made prediction of past or future outcomes impossible, an idea that violated the basic conventions of physics. As the famed physicist Richard Feynman pointed out, "Physicists like to think that all you have to do is say, these are the conditions, now what happens next?"

Newtonian Laws of Physics are completely deterministic: they assume that, at least theoretically, precise measurements are possible, and that more precise measurement of any condition will yield more precise predictions about past or future conditions. The assumption was that - in theory, at least - it was possible to make nearly perfect predictions about the behaviour of any physical system if measurements could be made precise enough, and that the more accurate the initial measurements were, the more precise would be the resulting predictions. Poincare discovered that in some astronomical systems (generally consisting of three or more interacting bodies), even very tiny errors in initial measurements would yield enormous unpredictability, far out of proportion with what would be expected mathematically. Two or more identical sets of initial condition measurements - which according to Newtonian Physics would yield identical results - in fact, most often led to vastly different outcomes. Poincare proved mathematically that, even if the initial

measurements could be made a million times more precise, that the uncertainty of prediction for outcomes did not shrink along with the inaccuracy of measurement, but remained huge. Unless initial measurements could be absolutely defined - an impossibility - predictability for complex - chaotic - systems performed scarcely better than if the predictions had been randomly selected from possible outcomes.

The *Butterfly Effect*, first described by Lorenz at the December 1972 meeting of the American Association for the Advancement of Science in Washington, D.C., vividly illustrates the essential idea of Chaos Theory. In a 1963 paper for the New York Academy of Sciences, Lorenz had quoted an unnamed meteorologist's assertion that, if Chaos Theory were true, a single flap of a single seagull's wings would be enough to change the course of all future weather systems on the earth. By the time of the 1972 meeting, he had examined and refined that idea for his talk, 'Predictability: Does the Flap of a Butterfly's Wings in Brazil set off a Tornado in Texas?' The example of such a small system as a butterfly being responsible for creating such a large and distant system as a tornado in Texas illustrates the impossibility of making predictions for complex systems; despite the fact that these are determined by underlying conditions, precisely what those conditions are can never be sufficiently articulated to allow long-range predictions.

Although chaos is often thought to refer to randomness and lack of order, it is more accurate to think of it as an *apparent* randomness that results from complex systems and interactions among systems. According to James Gleick, author of *Chaos: Making a New Science*, Chaos Theory is "a revolution not of technology, like the laser revolution or the computer revolution, but a revolution of ideas. This revolution began with a set of ideas having to do with disorder in nature: from turbulence in fluids, to the erratic flows of epidemics, to the arrhythmic writhing of a human heart in the moments before death. It has continued with an even broader set of ideas that might be better classified under the rubric of complexity."

Read more about it at:

- [James Gleick's book can be ordered at Amazon.com.](#)
- [ThinkQuest provides more information about Chaos Theory.](#)
- [At the University of Texas, Matthew Trump has written a primer on Chaos Theory.](#)
- [The California Institute of Technology provides a demonstration of the Butterfly Effect.](#)
- http://whatis.techtarget.com/definition/0,,sid9_gci759332_top1,00.html

Strategic Thinking as 'Seeing'³

Seeing ahead – having a vision for the future

Seeing behind – having a vision rooted in an understanding of the past

Seeing from above – understanding the bigger picture

Seeing from below – understanding what it looks like on the ground.

Seeing beside – seeing things from different perspectives, challenging conventional wisdom, lateral thinking.

Seeing beyond – placing creative ideas in a context of a world that is to unfold i.e. not just foreseeing an expected future but constructing a future that might be.

³ By Henry Mintzberg adapted from an article in Nasi, 1991.

Session seven

Exercise

Mapping a system. Ask participants to draw a Rich Picture of an activity/project/organisation that they are aware of and how it interacts with the wider system.

Think about: influencing factors at different levels e.g. global, regional, local

- social, economic, environmental, institutional, political
- stakeholders
- issues
- relationships
- feedback loops (both positive and negative)

Session Eight

Readings

Changing Environment Articles

Aid harmonisation challenges for civil society

Is the present focus on aid harmonisation, as embodied in the Paris Declaration, yet another attempt to marginalise civil society in development processes? Is it further evidence that most multi- and bilateral official cooperation agencies no longer regard civil society as a major actor in development, treating their contribution as instrumental at best and as marginal at worst?

In recent years we have seen many attempts to re-establish the state as the engine for development. This move is a counter-reaction to the 'rolling back the state' agenda favoured during the heady days at the end of the cold war when the private sector reigned supreme. What we are now seeing is an increasing emphasis on the role of the state – also as the focus of new forms of international cooperation. We have already had several such initiatives since the mid 1990s, including PRSPs, sector wide programme support and overall budget support. The latest initiative is the move towards aid harmonisation (See the article by Linda Lönnqvist in this issue on the Paris Declaration on Aid Effectiveness. For further information, see <http://www.aidharmonisation.org/>

or

<http://www1.worldbank.org/harmonization/Paris/ReviewofProgressChallengesOpportunities.pdf>)

The push for aid harmonisation seems to derive from two areas. Firstly, the need to improve the public administration of aid and the recognition that external aid can weaken local public administration. Currently, aid presents local government with an array of different, sometimes incompatible and sometimes competing forms of appraisal, approval, reporting, and evaluation procedures. Harmonisation seeks to reduce transaction costs for both recipient and donor governments. The second factor is the idea that aid harmonisation, through being tied to improved governance/ transparency conditions on public administrative reform, will eventually enhance the effectiveness of external assistance through reduced waste.

From the point of view of recipient governments and major donors, aid harmonisation has clear advantages. However, our concern is that there are few, if any, references to civil society in the increasingly unanimous voice from donor's materials on aid harmonisation. The only mentions are some oblique references to civil society being sub contractors of local government, and the one exception being that in more fragile states, civil society may still have a larger role.

Implicit in the aid harmonisation debates is that all international assistance (including NGO assistance) should go through the local government and be a part of

a unified aid programme set by government within a single and coherent framework.

Critiques of this model note that the concept of harmonisation is built on several assumptions which may well be contentious:

- 1) That national development plans are the product of democratic processes.
- 2) In light of the many unstable governments around the world, it is a pretty good guess that some of those in receipt of budget support and within the new harmonisation model will come unstuck through corruption and/or undemocratic structures.
- 3) A focus on a single aid basket (harmonised aid) makes the poor vulnerable to political change both by the state and donors. History has already given us many examples of populations being penalised because of their governments, but history also shows how civil society has managed to move into the space left by errant states – far more quickly than the state and official donors have been able to manage.
- 4) Even if the host government is democratic, others feel that it is not the role, nor necessarily the priority of civil society to dedicate itself to achieving government centrally agreed development goals. This is because, by definition, civil society groups will have their own constituencies on whose behalf they will be working. For example, the priorities of a federation of visually impaired people will clearly be different from an overall universal health or social welfare approach from central government. It is the interchange between these priorities and stakeholders that contributes to genuine democracy and diversity. To what extent will this interchange continue to be permitted?
- 5) Civil society does not exist to assist governments to meet their targets as this would reduce them to an instrument of the state, tied to a single set of aims set external to themselves. Even where government policies are pro poor and pro democratic, civil society should be valued because of its diversity and independence, not because it is an extension of the state.
- 6) Admittedly, often the response from civil society may only be to provide services in the short term. But this can be crucial in a situation of crisis. Civil society has also kept open the democratic space over many years under repressive regimes, and often under extremely difficult conditions.

Why is the issue of harmonisation of official aid of importance to NGOs? Because of the failure of this initiative to consider the role of civil society in development.

If we look for example at the new EU plans for funding, it is our understanding (see article by Janice Giffen in this issue) that from 2007 onwards there will be no co-funding mechanism for European NGOs. Instead all funding will be passed through EC country offices (delegations) and have to fit within the overall country strategy plans agreed between the delegation and recipient government. This would indeed fit within the new push towards harmonising aid and developing greater recipient government ownership over the aid programme in their countries. At stake is not

only the issue of how European NGOs will cope with this withdrawal of funds, (although this may well have far-reaching implications for the many who receive a considerable proportion of their budgets from the old co-funding programmes (**B7000**). Of greater concern are the implications this has for the development of a local, independent and autonomous civil society in recipient countries. For the policies of the Paris declaration as illustrated by the EU plan shows a failure to grasp the real value of civil society within a developmental context.

Brian Pratt

ONTRAC 2006

The Paris Declaration on Aid Effectiveness – an overview

"If implemented, [the Paris Declaration] will ... reduce bureaucratic hurdles, the cost of aid delivery, irrational conditionalities, endless meetings, and misuse of high-level talents in recipient countries through aid related meetings, visits and missions. It will remove unnecessary conditionalities, tied aid, delays in aid delivery and parallel institutional setups."

Tanzanian Ministry of Finance, The Guardian (Tanzania), 10th March 2005⁴

"Donors could look more closely at facilitating interactions between states and their societies, rather than being locked into fragmented approaches that support either governments or civil society groups, to the exclusion of the other"

Richard Manning, Chair, OECD Development Assistance Committee, September 2005⁵

Overview and background

The stated aim of the Paris Declaration on Aid Effectiveness is to tailor large-scale development aid to the specific requirements of recipient countries, and improve ownership, alignment, harmonisation, managing for results and mutual accountability.

Of these, aid alignment and harmonisation are the most relevant aspects for CSOs. The impetus for the aid effectiveness agenda came from the 2002 Monterrey UN Summit on Financing for Development, where bi- and multilateral donors agreed to increase both the effectiveness and volume of aid. This saw general budget support and basket funding become the favoured aid mechanisms. This momentum was taken further at the 2003 Rome Declaration on Harmonisation, which aimed to support the delivery of the Millennium Development Goals. The Paris Declaration on Aid Effectiveness (March 2005) followed, with more concrete goals – for example, collecting baseline data in order to sharpen numerical implementation targets, covering partner country procurement and financial management, and implementing the action plans developed at Rome. The next milestone in the aid effectiveness agenda will be the third High Level Forum in 2008. The Working Party on Aid Effectiveness at the Development Assistance Committee (DAC) of the OECD is the body in charge of implementing the Paris Declaration, with implementation targets for 2010.

⁴<http://209.183.227.156/ipp/guardian/2005/03/10/34360.html>

⁵ Guest Column, p. 16, Capacity.org Issue 26, September 2005 (9)

The aid effectiveness agenda deals specifically with aid from donor governments and large multilateral institutions to Southern governments - it does not refer directly to NGOs. It includes a few official civil society participants such as continent-wide NGO coalitions and large foundations. However, it is likely that the drive to centralise development funding will de-prioritise civil society development actors and diminish the role of civil society as a counterbalance to state power. A separate coalition of NGOs has published a statement calling for more ambitious Paris Declaration targets⁶.

Aid effectiveness– the agenda

Officially, the aim of the Paris Declaration is to lower the transaction costs that recipient countries face from administering their aid flows. Aid alignment focuses aid delivery on partner country priorities, and ensures that the country has the strategic and financial capacity to implement them. It strives to make aid delivery more prompt, and to decrease tied aid⁷ which benefits the donor country more than the recipient. Interestingly, however, the targets and deadlines for decreasing tied aid remain extremely vague – there is only mention of ‘continued progress over time’. Aid harmonisation calls for donors to coordinate their activities and eliminate duplication.

The table below lists the most relevant targets of the Aid Effectiveness Agenda. The baseline data for performance indicators have been sharpened by collecting numerical data in 2005. This means that targets such as ‘halve’ and ‘reduce’ can be more accurately monitored. However, the data has been criticised for building on World Bank PRSP data, hence carrying an inherent WB bias⁸.

⁶ NGO Statement on Aid Harmonization and Alignment, February 2005

⁷ Tied aid refers to aid that can only be used to buy goods or services (e.g. emergency food, technical assistance) from the donor country, boosting the donor country’s economy.

⁸ NGO Statement on Aid Harmonization and Alignment, February 2005

Selected OECD-DAC 2010 aid effectiveness targets⁹

Indicator		Target by 2010
ALIGNMENT – Donor/partner country issues		
3	Aid flows are aligned on national priorities	Halve the proportion of aid not reported on partner governments' budgets (at least 85% to be reported on budget)
4	Strengthen capacity by coordinated support (i.e. technical assistance)	At least 50% of technical cooperation is consistent with national development strategies.
6	Strengthen capacity by avoiding parallel Project Implementation Units	Reduce by two thirds the number of parallel PIUs (management units outside ministries, supporting donor-funded projects or programmes)
7	Make aid more predictable	Halve the proportion of aid not disbursed in the fiscal year for which it's scheduled
8	Untie aid	Continued progress over time
HARMONISATION – Issues between donors		
9	Use common arrangements	66% of aid (up from 43%) is provided through programme-based approaches (i.e. budget support - Basket funding and Sector-Wide Approaches)
10	Coordinate missions and analytic work	40% of donor missions involving meetings with officials are joint (carried out by more than one donor), and 66% of country analytic work is joint.

The DAC recognises that progress on aligning donor programmes is likely to be cumbersome and time-consuming¹⁰. A seminal problem is how to translate the indicators into reality. But aside from the many possible implementation problems, the Paris Declaration demonstrates a central tendency in development cooperation: consolidating aid flows under centralised authority. This will increasingly draw civil society into the political realm, as it becomes reliant on governments for continued funding. Northern NGOs may see their funding redirected to Southern governments. Southern NGOs may need to subordinate their priorities to those of their state, blurring the boundaries between 'non-governmental' and 'organisations'.

Linda Lönnqvist
ONTRAC 2006

⁹ Adapted from the "Paris Declaration on Aid Effectiveness: Suggested Targets for the 12 Indicators of Progress". High Level Forum, Paris, 28th February- 2nd March 2005.

¹⁰ Richard Manning, chair of the DAC Working Party on Aid Effectiveness. Guest Column, p. 16, Capacity.org Issue 26, September 2005

Session Nine

Case Study

A Bio fuels Manifesto: Why bio fuels industry creation should be 'Priority Number One' for the World Bank and for developing countries

Abstract

Traditional industrial development pathways, that did not take into explicit consideration the issue of energy technologies to be utilised, now imperil development prospects around the world. As oil supplies approach their peak globally, and energy security becomes a major issue, so developing countries have everything to lose by simply following fossil-fuel based industrialisation, and everything to gain by recasting their development strategies around the prospects for renewable energies and bio fuels. This is now a feasible prospect, as shown dramatically by the Brazilian experience, now being replicated in many developing countries, including most notably in India and China. These three countries – the BICs – are now leading the developing world to a new energy future and a new pathway of industrial development. This paper argues that the time is therefore ripe for developing countries, and development agencies such as the World Bank, to re-evaluate their stance on bio fuels. The paper argues that a swing behind bio fuels can unlock a chain reaction of favourable developmental processes – provided developing countries seize the initiative and set in place renewable energy industry creation projects before the developed world has managed to shake itself out of its fossil fuel dependence.

The world is finally having the debate over greenhouse gas emissions and what to do about them that we should have been having a long time ago. But many of the most prestigious and revered contributors to the debate are getting things round the wrong way. Many, if not all commentators, see China and India as becoming the worst offenders in terms of greenhouse gas emissions, and thereby imply – or are explicit – that they must be stopped to protect the rest of us. Others simply assert, albeit in the refereed pages of *Science*, that bio fuels cannot substitute for fossil fuels, although considering evidence that, on closer inspection, leaves out potentially vast resources in the developing world. But actually there is a quite different perspective, one that sees the three main developing countries today – Brazil, India and China – as the vanguard countries in the search for renewable energies.

From this perspective, it is the conjunction of concerns over the peaking of oil supplies, combined with the pressing concerns to reduce greenhouse gas emissions that are leading Brazil, India and China to develop a totally novel approach to the issue of renewable fuels, and bio fuels in particular. By so doing they are driving their own industrial development, in a way that offers exciting prospects for the rest of the developing world today. Far from being source of the world's environmental

problems, the developing countries, led by Brazil, India and China, could instead be leading the world to a practicable solution.

The world is on the verge of a vast and dramatic surge in investment in bio fuels – starting with ethanol, and then moving rapidly to bio diesel and a range of other biologically produced liquid fuels. While some companies in the US, Europe and Japan is already deeply involved in bio fuels and renewable energies generally, and while the oil and automotive industries dither over their responses to these developments, the fact is that this is one technological paradigm shift where the lead can be taken by the developing world.

Governments and entrepreneurs in China, India and Brazil in particular understand better than anyone else that that they cannot hope to achieve full industrialisation by simply following the same unsustainable fossil fuel pathway pursued by the developed world. If they burn coal, oil and gas at the same rate as the developed world has done, they will kill us all. More to the point, they well understand that they would be prevented by military threat – and by outright war – from attempting to do so. Renewable energy options for these countries therefore represent a compelling option.

Until recently, it was the conventional wisdom that renewable energies would be a marginal and costly alternative, that might make some headway over a century or more as technologies improved. But the case of Brazil and China and India shows that renewables – led by bio fuels and in particular ethanol – are competitive here and now, and what's more represent an exceedingly attractive option for developing countries. The advantages for developing countries of ethanol and bio diesel over their fossil fuel counterparts as transport fuels are many, and include the facts that:

- They are cheaper than oil;
- They provide energy security as opposed to dependence on imports from Unstable oil regimes;
- They burn more cleanly;
- They generate fewer greenhouse gases;
- They promote rural development;
- They can generate new export industries for developing countries;
- Even countries with a low level of science and technology can get a start with Bio fuels; and
- They promote South-South cooperation, led by cooperation and investment between Brazil, India and China.

Strategising around renewable energy is fundamentally different from securing strategic supplies of fossil fuels, in particular oil. To engage in global strategic games (with their deadly consequences in the form of resource wars) in pursuit of security of oil supplies is one thing – and China, India and Brazil are all playing that game, with increasing sophistication and success, to the consternation of the US and its western allies.

The key issues here are military strength, international political and military alliances, and diplomatic manoeuvring. But to strategise around renewable energy sources calls for calculations of a quite different kind. This calls for interventionist industry policies to kick-start new renewable energy industries, such as those based on growing and distilling bio fuels; or on capturing solar energy; or building wind farms and kick-starting domestic industries to produce PV solar cells and wind turbines. But more than this it calls for sophisticated design of the institutional settings in which a transition to utilisation of renewable energy may be effected – from mandating the use of ethanol-petrol blends in motor vehicles, and extending such mandates to diesel-powered machines, to mandating rising proportions of electric power generation from renewable sources; to sophisticated tax measures that offer incentives to move towards energy conservation and efficient fuel usage and disincentives to inefficient fuel use (such as indiscriminate use of SUVs in cities).

The point is that strategising around renewables goes to the heart of an industrial development strategy – and one that is, moreover, tuned to the fundamentals of energy supply and demand, rather than being framed in purely monetary terms.

Brazil has taken an early lead in bio fuels, driven by its huge domestic ethanol programme that has seen its use as a blended fuel mandated by the federal government, backed by early subsidies to sugar producers to enable them to produce ethanol as well as sugar. Now Brazil has a thriving export industry for bio fuels, with firms operating bioreactors at its core. In these reactors a decision to produce sugar or ethanol can be taken on a daily basis, at the flick of a switch, depending on current world prices. In 2005 Brazil started to replicate its success with bio ethanol through a bio diesel programme. Already by late 2006 this programme had generated 100,000 jobs in the northeast of the country, producing bio diesel from oil crops such as castor oil and palm oil. The Brazilian national energy company, Petrobras, introduced a new bio diesel product, dubbed H-Bio, produced at the refinery, in 2006, the first in the world to do so. In the words of Brazil's minister of agriculture, Roberto Rodrigues, "Renewable fuel has been a fantastic solution for us. And it offers a way out of the fossil fuel trap for others as well."¹

China and India are Brazil's largest export markets for ethanol, and are themselves rising fast as producers, now as 3rd and 4th largest ethanol producers in the world, and rising fast in the bio diesel stakes as well. Many other tropical developing countries, in Asia and in Central America, are also becoming active in bio fuels. In promoting renewable energy futures, in their own interests, developing countries can thereby create a new agenda for solving the wider problems of global warming. While many economists and policy specialists have addressed themselves to this issue, most see the developing world blindly following in the footsteps of the polluting developed countries; few if any see developing countries as part of the solution.² Herein lies the attractiveness of developing countries, and development agencies like the World Bank, in getting behind bio fuels and renewable energies. By doing so, they take the lead in moving the world to its destined future independence from fossil fuels – as envisaged by numerous scholars, and captured most effectively

by the IIASA/WEC study, *Global Energy Perspectives*, published in 1998, as shown in Chart 1.3

The era when industrial development strategies could be formulated without reference to energy sources, is over. When we look just at the developing countries, of the world's 47 poorest, no fewer than 38 are net oil importers, and 25 are completely dependent on oil imports – victims of commitments made during the times when the price of oil was seen as low forever. Yet these are the countries that generally have favourable circumstances for producing biofuels.⁴ If the argument of this paper is sound, then it means that renewable energies – starting with bio fuels – represent a unique and irreplaceable opportunity that must not be missed. It means that organisations such as the World Bank should be getting behind the renewables option – and in particular bio fuels – with huge and massive assistance, making it their top priority.⁵ For developing countries generally, bio fuels are pressing to be considered as Number One priority because of their multiple benefits and multiplier effect they induce

The case of Brazil

Brazil has emerged as the world's leading producer of bio fuels, encompassing ethanol and bio diesel. It has built this leadership position through distinctive crops that maximize its advantages as a tropical country, deriving ethanol from sugarcane, and bio diesel from a variety of oilseeds. Some of these, like castor oil, are being grown as a deliberate strategy on degraded and arid lands in the impoverished north-east, thereby giving a major fillip to social development in the region.

Brazil has become the world's largest producer and exporter of ethanol. In 2005, production of sugar and ethanol in Brazil totalled 28.7 million metric tons and 4.8 billion gallons (18.17 billion litres, or 18,170 ML), which are record levels. The industry is highly decentralised, but it also includes national lead firms like Petrobras, which is rapidly morphing from an oil producer to an energy producer, with a focus on ethanol and bio diesel. The industry has really taken off in the 2000s as the unsubsidized price of ethanol has fallen below that of oil – as shown in Chart 2.

Brazil grows sugar cane crops on five million hectares, a fifth of its land under cultivation. In Brazil there are around 60,000 crop suppliers (farmers and farmer coops) supplying over 340 industrial units producing ethanol (bioreactors and distilleries), with a further 50 such units under construction.⁶ The ethanol industry supports an estimated 500,000 jobs in the countryside, and a further 500,000 jobs in indirectly related employment. In Brazil many of the ethanol plants are in fact dual plants, running with technology that allows them to produce either sugar or ethanol, at the flick of a switch – depending on the world price of each. In fact some plants are now built as triple integrated plants, involving sugar, ethanol and biodiesel.⁷

The share of sugarcane used in ethanol production is expected to rise substantially in coming years. Brazilian ethanol is far more competitive than that produced in the

U.S. from corn or in Europe from sugar beet, because of shorter processing times (the starch in corn or beet has to be rendered into sugars first), lower labour costs, lower transport costs and input costs. But there are also subtle factors at work as well. In Brazil a massive R&D effort has been devoted to unlocking the biological secrets of sugar and ethanol. At the Centro de Tecnologia Canavieira (Cane Technology Centre), an R&D facility funded largely by the sugarcane industry the genome of sugar cane has been decoded, and used to select varieties that are more resistant to drought and pests and that yield higher sugar content. The Centre has developed some 140 varieties of sugar, which has helped to drive costs down by 1% a year, and allowed the country to avoid the pests and diseases that can ravage monoculture. This is a latecomer advantage – the capacity to focus R&D exclusively on a topic of national economic significance, rather than across the board. Brazil has done this to a refined degree with sugar and alcohol, and results speak for themselves.

No wonder successive delegations from India and China have been visiting Brazil over the past year. Brazil's success with ethanol goes back to the 1970s, when the country's military leaders reacted to the 1973 oil crisis with a drastic push towards ethanol. Brazil in the 1970s was 80% dependent on oil imports, and 40% of its foreign exchange earnings were used to import oil. The country slid into recession, and by the mid- 1970s was facing bankruptcy.

In these circumstances the military government issued a directive requiring that the country's gasoline should be blended with 10% (E10) ethanol – a level that Brazil raised steadily over the next five years to 25% (E25).⁸ To facilitate the shift, the government provided sugarcane companies low interest loans to build ethanol plants, as well as funding indigenous efforts to produce a car that would run on pure alcohol – which was achieved at a Brazilian Air Force laboratory, leading to a 5,000 mile trip embarked on by the cars, with banners announcing 'Powered by Alcohol.'

Then after the 1979 Iranian revolution, and a further rise in oil prices, the Brazilian government implemented the National Alcohol Programme, or Proalcool programme, under which the ethanol blend targets were raised; further subsidies and low-interest loans were made to sugar companies to raise ethanol production; tax breaks were offered to car companies to build ethanol-powered vehicles; and the national oil company, Petrobras, was ordered to make ethanol available at filling stations.

By the end of 1979, Fiat was offering an ethanol-only vehicle for sale in Brazil. All told, Brazil spent a total of \$16 billion from 1979 until the mid-1990s on the Proalcool programme – with savings in oil imports amounting to at least US\$120 billion. The programme dipped in the mid-1980s, as oil prices fell to record lows. But it was never entirely discontinued, and meantime Brazilian sugar producers were raising their productivity.

By the mid-1990s, Brazil had discontinued its subsidies for the sugar industry, forcing producers to be world competitive. As oil prices rose again in the 2000s, so the programme came back into fashion, this time under a civilian administration, and this time building on the competence base established by the Proalcool programme. Brazil now mandates a fuel blend of E25 nationally. But ethanol has become so popular that it now accounts for at least 40% of all vehicle fuel, and rising. Brazil is estimated to save \$50 billion per annum in terms of petroleum imports – one of the most significant of the side-effects of moving to bio fuels.

The critical breakthrough in the recent period has been the idea of flex-fuel vehicles (FFVs) – an institutional innovation riding on the back of a simple technological innovation. Flex-fuel vehicles, introduced in Brazil in 2003 and their sales have increased dramatically since, by 585% in 2005, so that the share of flex-fuel vehicles (FFVs) in the total vehicle fleet reached 22% in 2004. It is expected to reach 60% in 2006.⁹ The flex-fuel vehicle is an ordinary vehicle fitted with a sensor, to detect the oil ethanol blend at any given moment in the petrol tank; an on-board computer programmed to adjust the engine mechanism to the current fuel mix; and a simple adjustment of the engine firing systems to accommodate pure ethanol. The total package can cost as little as US\$80.

It was Brazilian innovation that came up with the device. Although Ford had offered a flex-fuel system in a few of its vehicles, dating back to 1991, the Brazilians thought the device clumsy. A designer at the Italian parts company, Magneti Morelli in Brazil, Fernando Damasceno, created the current Brazilian system by programming a standard car computer to do the job. In 2002 the company licensed the device to VW, who introduced its first flex-fuel vehicle, the Gol, in 2003. It took off like the proverbial rocket, and nothing has been the same in Brazil since. Brazil is now turning to ethanol as aviation fuel as well, to complement its success in aviation exports, e.g. through Embraer. Small planes, like crop dusters, are reported to be switching to ethanol because it is cheaper and more widely available. They are thinking along the same lines as Richard Branson, who has been reported to have invested heavily in ethanol production systems for his Virgin Atlantic and Virgin Blue airlines.

Bio diesel in Brazil

Brazil is also taking steps towards bio diesel, as the second phase of its planned development of bio fuels. The pieces were put in place as early as 2003 when a special strategy workshop was held by the newly elected Lula administration.¹⁰ Then in 2005 the National Bio diesel Production Programme was launched, as a total programme, encompassing phased introduction of bio diesel blends, and the encouragement of supplies, their standardisation and quality assurance, and the active promotion of small family farms in the impoverished north-east as suppliers.

The Bio diesel programme is focused on the cultivation of a variety of oilseeds, including such well known staples as soybean and palm oil, and including newer

varieties that are non edible, such as castor oil, which cannot therefore be viewed as competing with foodstuffs. The phased blends involve a voluntary blending of up to 2% initially, moving to a mandated 2% blend by 2008, and rising to a mandated 5% blend (B5) by 2013 at the latest.¹¹

As discussed below, the Brazilian bio diesel programme is a carefully thought through initiative, involving institutional innovations such as the use of a special 'Seal of Social Responsibility' which can be awarded to bio diesel producers if they source their oilseeds from small, family-owned farms in the impoverished north-east. By September 2006, when the programme was no more than 18 months old, already 20,000 such farms had been enrolled in the programme, creating up to 100,000 new rural jobs in the cultivation of oilseeds for bio fuels. Thus the Bio diesel programme is being carefully crafted in Brazil, in conscious imitation of the country's successful Proalcool Programme. Several plants are now being constructed or are in operation, using advanced technology supplied by leading oil companies such as the Belgian giant DeSmet Ballestra, which has licensed its technology to the major Brazilian supplier of bio diesel and ethanol plant equipment, Dedini. Brazilian agro industrial producers now include such national firms as Granol (one of the largest conglomerates in Brazil, with its own industrial units, warehousing and purchasing operations, and port terminals), Usina Barralcool, and Grupo Bertin.¹² There is also home-grown technological innovation helping to drive the Brazilian bio diesel programme.

In mid-2006, the Brazilian national energy company, Petrobras, announced that it had developed a hydrogenated vegetable oil/mineral oil mix, dubbed H-Bio, to be its lead bio diesel product in coming years. As opposed to the current method of choice (transesterification) to produce bio diesel, H-Bio is produced by catalytic hydrogenation of a vegetable oil/mineral oil mix. The hydrogenation is carried out at a refinery, where hydrogen is produced as a by-product from petroleum refining processes. H-Bio represents a revolutionary new approach to production of bio diesel, and puts Petrobras in the world lead in this emerging market. It enables Petrobras to benefit from the wide variety of oil-crops currently grown in Brazil, as shown above in Table 1. Petrobras has announced that it plans to utilise 256 million litres of soy oil in the first year (10% of the total of soy oil exported by Brazil) and that this will represent a saving of 15% in diesel imports, amounting to a saving of US\$145 million in the first year, and US\$240 million in the medium-term. Brazil currently imports 10% of its diesel fuel needs. While soy oil is being used for H-Bio at first, it is expected that other oils, such as castor, sunflower, palm and cotton oils will be used in oil blends in the future. According to Petrobras, investments needed to modify the refineries are small, of the order of US\$38 million. As of 2008, the company has announced plans to spread the process to two more refineries, with a further US\$23 million in investments. By then, the company will be processing 425 million litres of oil, representing a 25% reduction in the need for imported diesel.

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September 2006

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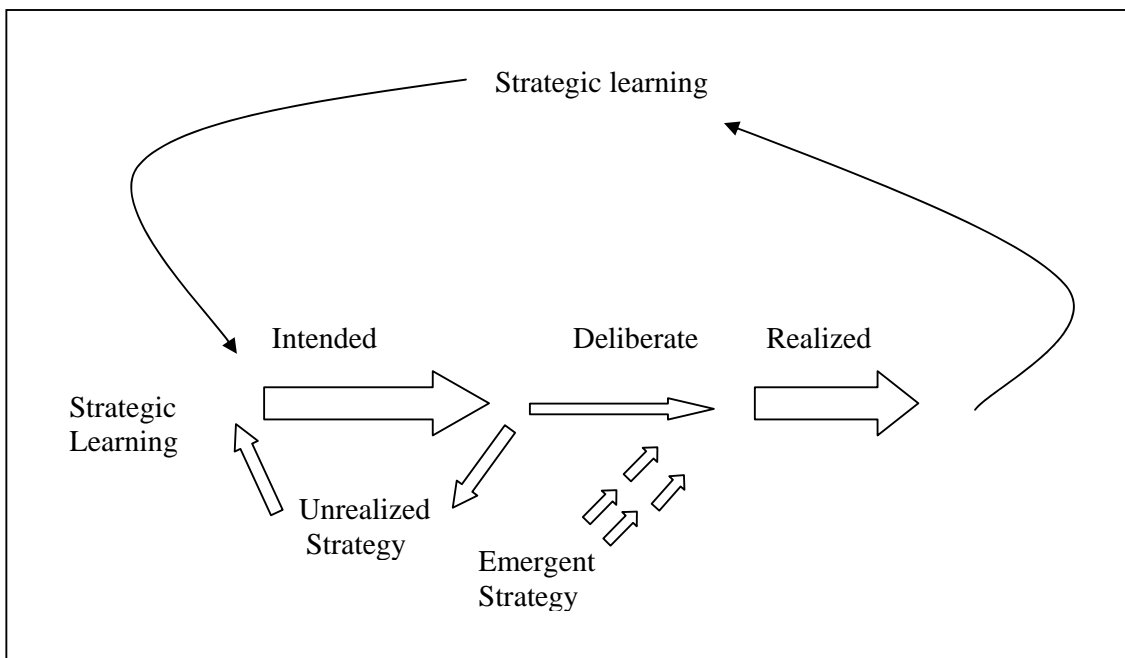
Session Ten

Framing Strategy

1. Strategy Formation

Perhaps the first thing that comes to most people's minds when asked to describe a strategy is that it is a consciously developed *plan*. However, Henry Mintzberg has been one of the foremost authorities to question this narrow definition of strategy. He draws attention to the fact that as well as being a framework for future *intended* action, a strategy is simultaneously a reflection on the past – identifying a pattern in the action which actually took place. He believes that rigorous planning is neither desirable nor feasible in a rapidly changing environment, and that flexibility is needed to respond to the significant and influential opportunities that sometimes arise without being anticipated.

Mintzberg¹¹ drew a model to express this:



Source: Mintzberg H and Quinn JB (1992) *The Strategy Process: Concepts and Contexts*, Prentice Hall, USA.

¹¹ Source: Mintzberg H and Quinn JB (1992) *The Strategy Process: Concepts and Contexts*, Prentice Hall, USA.

- **Intended strategy** refers to the strategic goals
- **Deliberate strategy** means those intentions which actually happened in practice.
- **Unrealised strategy** refers to the intentions, which, for whatever reason, were never translated into action.
- **Emergent strategy** is the pattern of the organisation's responses to changes in the external environment which were not anticipated when the original strategy was formulated, but which created opportunities.
- **Realised strategy** is the strategy actually implemented and is the sum of deliberate strategy (which was intended as part of the original strategic plan) and emergent strategy (which was not foreseen but which was consistent with the organisation's mission and values and was implemented).
- **Strategic learning** feedback loops recognise the importance for managers of learning from the experience of what happened and why so that future intended strategies can be better formulated.

1. The Process

Developing the intended strategy provides an excellent opportunity to gather the views and wishes of the NPOs beneficiaries, staff, managers, donors, other NPOs and other people who have an interest in the organisation and what it does. Bringing in their participation creates a sense of ownership and ownership encourages commitment to the strategy which in turn aids its achievement.

When we consider the overall process of strategy formation and implementation we can identify several separate stages:

1. Getting Prepared
2. Gathering Information
3. Analysing and interpreting the information
4. Identifying the key strategic options and making Choices – identifying strategic priorities.
5. Drafting the document
6. Acquiring resources
7. Implementing the strategy
8. Reviewing and updating the strategy

3. The 8 steps of strategy development

Get organised

- Decide whether to develop a strategy
- Get commitment to the strategy development effort
- Determine whether outside help is needed
- Outline a process that fits your organisation
- Form a strategy development team if needed

Gather information

- Gather information about the problems facing your current (or possible future) beneficiaries
- Collect beneficiaries' views about their needs and how these might best be met
- Gather information about the history of your organisation
- Gather information about the present situation of your organisation and assess its strengths and weaknesses using organisation assessment techniques.
- Gather information about the outside changes and trends and assess the opportunities and threats/constraints facing the organisation.

Analyse the information and identify the key strategic option

- Assess the **strategic issues** facing the beneficiaries and the organisation
- Develop the **strategic options** to address these strategic issues and achieve your NPO's mission and vision
- Be creative in the way you develop strategic options – do not restrict yourself to current approaches

Develop the strategic priorities

- Decide which of the strategic options to follow
- Develop **strategic priorities** to achieve the organisation's mission and vision. Try to limit the number of priorities to no more than five or six.
- Consider any necessary changes in organisation structure, staffing and systems which will be required
- Ensure that the organisation has, or can develop, the capability to implement the strategy

Draft the strategy document

- Test the strategy for feasibility
- Do not adopt strategies without careful consideration of whether they can be implemented
- Produce a written document which all stakeholders can understand
- Introduce the plan to all stakeholders and alter in the light of their feedback
- Formally adopt the plan and gain commitment to it
- Devise suitable Human Development policies and systems to support the strategy
- Devise suitable Financial Management systems to enable implementation
- Devise suitable Communications and Resource Mobilisation sub-strategies to support the strategy

Acquire resources

- Ensure that the necessary resources are acquired (people, financial, information, materials)

Implement the strategy

- Develop objectives and activities for each of the strategic priorities in the form of a **plan of action**
- Develop **indicators** for measuring progress
- Put the plan into action
- Monitor progress using the indicators
- Take corrective action when required

Strategic Learning – Review and update the strategies

- Continue to gather and analyse information on the external environment
- Be open to learn from 'emergent' strategy
- Modify the strategy in the light of significant external or internal changes
- Do not become a slave to the detail of the plan but act according to its broad intent.
- Be willing to make changes quickly to avert crises or take advantage of opportunities.
- Always think about whether these decisions are broadly consistent with the NPO's strategy and mission

Source: Wye at Imperial *NGO Management* at distance course material, University of London

Analytical Tools

1. PESTLE Analysis

A tool often used in strategic planning is the PESTLE analysis. It provides a framework for looking at the external environment and mapping trends that may impact on your work.

PESTLE stands for:

- Political
- Economic
- Sociological
- Technological
- Legal
- Environmental

Political

List the political factors and trends in the country (including the government, legislature, judiciary and other government bodies, as well as other political movements and pressure groups).

Economic

List the economic factors and trends in the country (including GNP, debt schedules, sources of government income, main employers, income distribution, etc).

Sociological

List the sociological factors and trends in the country (including demographic information, education and health statistics, employment rates, land ownership, media, etc).

Technological

List the technological factors and trends in the country (including information technology infrastructure, access to telecommunications and broadcast media, etc).

Legal

List the legal factors and constraints that are relevant to your advocacy work.

Environmental

List the environmental factors and trends in the country (including deforestation and desertification, pollution, drought/flooding patterns, wildlife, agriculture, etc)

Having listed all the factors, you should then identify which of these may be significant to your work – either as opportunities or threats. You should then take account of these factors in your planning, and possibly do more research on the factors.

2. Portfolio Analysis

In the work of any organisation it is possible to identify activities, services or projects with different characteristics which contribute in different ways to the achievement of the organisation's mission. These can be classified in four broad categories (which are based on the 'Boston Portfolio Matrix'):

1. **Stars:** strong projects or activities with real potential for growth, dynamic, popular and creative. Stars may become 'foundation stones' or become short-lived 'shooting stars'.
2. **Question marks / problem children:** new or innovative projects but not yet proven. They may be new or innovative projects that may become very effective, develop into 'stars' and move into square 1. Alternatively, they may fail and move into square 4. They need to be monitored closely.
3. **Foundation Stones:** reliable, safe projects or activities that provide the organisation with a degree of financial security and/or credibility. They provide a solid base for the organisation. They may start by being popular with funders but may become unattractive later because they are no longer seen as innovative.
4. **Dead ducks:** take up management and financial resources and provide little or no added value for the effort required. Often organisations have problems dealing with such activities.

Place the organisation's activities and projects on the Portfolio Matrix by allocating each to one of the four squares.

1. 'STARS'	2. QUESTION MARKS / PROBLEM CHILDREN
3. 'FOUNDATION STONES'	4. 'DEAD DUCKS'

3. SWOT Analysis

SWOT analysis is used to identify an organisation's strengths and weaknesses and the opportunities and constraints it faces in the external world.

- Strengths and Weaknesses are internal to the organisation.
- Opportunities are attractive arenas for action which the organisation can respond to because it has some special advantage or contribution to make.
- Threats are unfavourable trends or specific changes in the external environment that could lead to stagnation, decline or the demise of the organisation or part of it.
- Opportunities increase the chance of an organisation achieving its mission, threats prevent it (or at least make it difficult for) the organisation to achieve its mission.

The analysis is typically displayed in a 2 x 2 matrix. Research or brainstorming can be used to generate the factors, which should be listed as bulletin points in each box.

	POSITIVE	NEGATIVE
INTERNAL	Strengths	Weaknesses
EXTERNAL	Opportunities	Threats/Constraints

Source: 'Strategies for Success' by Hilary Barnard and Perry Walker, NCVO, 1994

Session Eleven

Exercise

In groups select a project or programme and together with help from the participants develop a strategy using the 8 steps to strategy development.

Session Twelve

Action Planning

My Personal Action Plan

What 3 actions will I take following this training:

1.

2.

3.

How will I do them?

By when?

Further Reading/ Resources

Allison, M and Kaye, J (2005) Strategic Planning for Non-profit Organizations: A Practical Guide and Workbook, 2nd Edition: A Practical Guide and Workbook

Ashford, G. and Patkar, S. (2001) The Positive Path: Using Appreciative Inquiry in Rural Indian Communities, Winnipeg: International Institute for Sustainable Development.

Bammer, G. (2003) Embedding Critical Systems Thinking in the Academy, the Australian Nat. University/ Hauser Centre for Non-profit Organizations, Harvard (www.mngt.waikato.ac.nz/research/ejrot/cmsconference/2003/proceedings/orsystems/Bammer.pdf).

Blackman, D. (2004) How Sharing Mental Models Can Lead to Stagnation, Paper 145, (www.handels.qi.se/ifsam/Streams/oth/obh.htm).

Browne, M. N. and Keeley, S. M. (2004) Asking the Right Questions: A Guide to Critical Thinking. London: Pearson Education.

Bryson, J. M (2004) Strategic Planning for Public and Non-profit Organizations: A Guide to Strengthening and Sustaining Organizational Achievement, Jossey Bass Public Administration Series.

Bulow, I. Von. (1989) 'The Bounding of a Problem Situation and the Concept of Systems Boundary in SSM', Journal of Applied Systems Analysis 16: 35–41.

CIDA (2004) Strategic Planning: A Guide for Canadian NGOs. Canadian International Development Agency.

Chapman, J. (2002) Systems Failure. London: Demos.

Ebrahim, A. 2003. "Building Analytical and Adaptive Capacity: Lessons from Southern and Northern NGOs". Paper prepared for delivery at the National Conference of the Association for Research on Non-Profit Organizations and Voluntary Action (ARNOVA), Denver, Colorado.

Ferdig, M. A. (2000) Complexity Theories: Perspectives for the Social Construction of Organisational Transformation. Illinois: Benedictine University.

Gleick, J. (1987) Chaos, Making a New Science, Penguin Books, New York

Grant, R. 2002. "Contemporary Strategy Analysis: Concepts, Techniques, Applications" Blackwell Publishers, Oxford.

Hailey, J. and James, R. (2002) 'Learning leaders: the key to learning organisations', *Development in Practice* 12 (3–4).

Lam, A. (2004) 'Organizational Innovation', Working paper No. 1, Brunel Research in Enterprise, Innovation, Sustainability & Ethics, Brunel University, West London.

Lake, N (2006) *The Strategic Planning Workbook*, Business Enterprise

Lissack, M. R. and Gunz, H.P. (1999) *Managing Complexity in Organisations – A View in Many Directions*. Westport: Quorum Books.

Meadows, D. & Randers, J.(1992) *Beyond the Limits*, Chelsea Green Publishing Co., Post Hills, VT

Mintzberg, H. (2000) *The Rise and Fall of Strategic Planning*. London: FT Prentice Hall.

Mintzberg, H. and Quinn, J. B. (1996) *The Strategy Process: Concepts, Context, Cases*. New Jersey: Prentice Hall.

Montuori, A. (2003) 'From Strategic Planning to Strategic Design: Reconceptualising the Future of Strategy in Organizations', *World Futures: The Journal of General Evolution* 59.

Morgan, P. (2005) *The Idea and Practice of Systems Thinking and Their Relevance for Capacity Development*. Maastricht: European Centre for Development Policy Management (ECDPM).

Olson, E. E. and Eoyang, G. H. (2001) *Facilitating Organization Change: Lessons from Complexity Science*. San Francisco: Jossey-Bass/Pfeiffer.

Prahalad, C.K. and Hamel, G. (1990) 'The Core Competence of the Corporation', *Harvard Business Review* 3: 79–91.

Richardson, George P. (1991) *Feedback Thought in Social Science*, University of Pennsylvania, Philadelphia

Rihani, S. (2002) *Complex Systems Theory and Development Practice – understanding non-linear realities*. London: Zed Books.

Schein, E. (1992) *Organisational Culture and Leadership*, Jossey-Bass, San Francisco

Seel, R. (1999) *Complexity and OD – an Introduction*. St Bonaventure University.

Senge, P., Otto Scharmer, C., Jaworski, J. and Flowers, B. S. (2004) Presence: Human Purpose and the Field of the Future. Cambridge, MA: The Society for Organizational Learning, Inc.

Senge, P. et al, (1994) The Fifth Discipline: Fieldbook, Nicholas Brealey Publishing, London

Sorgenfrei, M., Wrigley, R. (2005) Building Analytical and Adaptive Capacities for Organisational Effectiveness, Praxis Paper No. 7, INTRAC, Oxford

Stacey, R. (1992) Managing Chaos – Dynamic Business Strategies in an Unpredictable World. London: Kogan Page Ltd.

Sterland, B. (2005) 'Metaphor and Analogy – Creating Meaning and Understanding Complexity', [Praxis Note 9](#), Oxford: INTRAC.

Teece, D. and Pisano, G. (1994) 'The Dynamic Capabilities of Firms: an Introduction', Industrial and Corporate Change 3 (3).

Tower, D. (2002) 'Creating the Complex Adaptive Organisation – a Primer on Complex Adaptive Systems', OD Practitioner, Journal of the Organization Development Network 34 (3).

Vogelsang, J. (2004) 'Futuring – A Complex Adaptive Systems Approach to Strategic Planning', Article 5, (www.supportctr.org/futuring.php), Support Centre for Non-Profit Management, New York.

Weick, K. (1995) Sense making in Organisations. California: Sage.

Wheatley, M. J. and Kellner-Rogers, M. (1995) 'Breathing Life into Organisations – Discovering a New Worldview', Journal for Quality and Participation July/August.

Wilhelmson, L. and Döös, M. (2002) Sustainability and Innovative Organisational Change – Identifying and Dealing with Non-Synchronised Processes in a Rapidly Changing Environment, Scientific Series: Working Life in Transition, Sweden: National Institute for Working Life.