

# SCHOOL GARDENS CONCEPT NOTE

Improving Child Nutrition and Education through  
the Promotion of School Garden Programmes



*Source: FAO (2002)*



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# Improving Child Nutrition and Education through the Promotion of School Garden Programmes<sup>1</sup>

## Executive summary

In most developing countries there are school gardens, the best examples of which are usually the result of community-led initiatives or the dedication of particular teachers.

School gardens, both urban and rural, can have several interrelated objectives, including:

- increasing the relevance and quality of education for rural and urban children through active learning and through introduction of agriculture and nutrition knowledge and skills, including life skills, into the curriculum;
- providing school children with practical experience in food production and natural resource management, which serve as a source of innovation they can take home to their families and apply in their own household gardens and farms;
- improving school children's nutrition by supplementing school feeding programmes with a variety of fresh micronutrient and protein-rich products, and increasing children's knowledge of nutrition, to the benefit of the whole family.

Carefully designed, comprehensive national programmes and guidelines, which leave ample room for local adaptation and the full engagement of local communities, are an important basis to realize the full potential of school gardens.

At the national level, a school garden programme, to meet the above-mentioned objectives, should provide for:

- institutional arrangements which bring together and coordinate key players, especially Ministries of Education, Agriculture and Environment, to facilitate the development of a national policy framework and implementation guidelines, and provide technical support for programme planning and implementation;
- training of teachers, school canteen cooks and volunteers from within the community in the planning and management of school gardens and in their use for teaching and school feeding, as well as the preparation of practical training guidelines;
- integration of school gardening into the curriculum to ensure adequate time is available for school gardening and related teaching activities without compromising the rest of the curriculum;
- development of teaching materials, including textbooks, visual aids, and videos;
- budgetary support towards the cost of land development (e.g. fencing, irrigation, etc.) and elements of school garden operation and upkeep;
- budgetary provision for the core elements of school feeding programmes in all schools with a school garden;
- adequate monitoring and evaluation of the programme.

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<sup>1</sup> This concept note is the collaborative product of an ad hoc interdepartmental working group with members from the Crop and Grassland Service (AGPC), Extension, Education and Communication Service (SDRE), Nutrition Programmes Service (ESNP) and SPFS Management and Coordination Service (TCOS).

At the local level, the programme should provide for:

- means of engaging the community in which the school is located, e.g. through parent-teacher associations (PTAs), in the development and management of the school garden, including the provision of local expertise and advice, land and voluntary labour and possibly some inputs;
- a reliable source of technical advice on garden development and management, home economics and nutrition (e.g. from local agricultural extension services, health services, non-governmental organizations (NGOs) and farmers' organizations).

FAO, in close collaboration with WFP, is prepared to assist governments in the preparation of school garden programmes, at national and local levels, as well as in resource mobilization. FAO may also serve as an intermediary in the development of garden based twinning arrangements between schools in developed and developing countries.

## Introduction

A high incidence and severity of poverty in many countries results in hunger, high school drop-out rates and low levels of learning, problems which affect millions of primary school children. The main nutritional problems facing school-age children include stunting, low body weight and micronutrient malnutrition, including deficiencies of iron, iodine and vitamin A. Children who come to school hungry, or are chronically malnourished, have diminished cognitive abilities that lead to reduced school performance. They also suffer from decreased physical activity and reduced resistance to disease, and hence have shorter life expectancy. In the long run, chronic undernutrition and micronutrient deficiencies decrease individual potential and have adverse effects on productivity, incomes and national development.

Nutritional well-being requires access by all people at all times to *adequate food, health, education and social care*. The 1996 World Food Summit (WFS) held at FAO headquarters in Rome, and the World Food Summit: *five years later* (WFS:*fy*) in 2002 reaffirmed the right of everyone to have access to safe and nutritious food and to be free from hunger. Furthermore, the need to overcome hunger, poverty, and illiteracy is included in the two first Millennium Development Goals.

To protect and promote access to adequate food for all, FAO has launched a range of programmes and initiatives that are aimed at reducing poverty and helping individuals and households to improve their nutritional well-being and standards of living. The **Special Programme for Food Security** (SPFS) which was initiated in 1994, two years before the WFS, is FAO's flagship programme, through which the Organization assists developing member countries in reducing the incidence of hunger and malnutrition, mainly by increasing productivity and diversifying production systems of small-scale farmers. The WFS:*fy* resulted in all participating governments reaffirming their commitment to attain the goal of halving the number of undernourished people in the world by 2015. The **Anti-Hunger Programme (AHP)**, launched during the WFS:*fy*, makes a strong case for a twin-track approach towards meeting the WFS goal, which combines actions to improve the performance of small-scale farming with measures to broaden access to food, enabling the poorest people, who are unable to produce or buy enough food, to eat adequately. In those countries that have demonstrated the political will to launch a National Programme for Food Security (NPFS), FAO, through the evolving SPFS, will assist in identifying and implementing the combination of actions necessary to reach the goal of halving the number of undernourished persons by 2015.

In this context, FAO recognizes the important contribution that schools can make in member countries' efforts to overcome hunger, poverty and illiteracy. Schools are one of the main social contexts in which knowledge, behaviours, attitudes, values and life skills (e.g. personal responsibility, self-esteem, teamwork, decision-making and planning) are developed. They offer an effective vehicle through which to reach children, when habits and attitudes are being formed. Schools have the mandate to guide young people towards maturity and thus can play an important role in promoting learning about food, agriculture and nutrition. They have qualified personnel; they can spread the knowledge and skills that children acquire by involving families in their children's education; they can also serve as a channel for community participation and can provide cost-effective food and nutrition interventions.

School gardens are cultivated areas around or near to primary and/or secondary schools, which can be used mainly for learning purposes but could also generate some food and income for the school. School garden activities usually comprise horticultural crops but may include small-scale animal husbandry and fishery, beekeeping, fruit trees, ornamental plants and shading, as well as small-scale staple food production.

Historically, stakeholders with different priorities have developed school gardening along differing lines. In the North, *garden-based learning* (meaning using gardens as laboratories for practical learning of basic subjects such as biology, environment, mathematics, chemistry, language, arts, etc.) is prevalent and has been quite successful, whereas in the South, *school-based food production* has been the main orientation. The latter has faced many difficulties and has generally proved to be unsustainable. As a result, specialists in this field share the opinion that the new challenge for school gardens is to help students learn about food production, nutrition and environment education and personal and social development related with basic academic skills (reading, writing, arithmetic) while generating some food production to supplement school feeding programmes.

In order for children to grow up and become healthy citizens with secure livelihoods, one of the urgent needs is to enable children to stay in school and to acquire knowledge and skills which are relevant to their lives and environment. Learning how to prepare a garden to produce vegetables, fruits and other foods; conserving water and other natural resources; planting, processing and preparing foods for optimal nutritional value and income; selecting and buying foods from farmers' markets and supermarket shelves to get best value for money; practising proper food safety, personal hygiene and sanitation; learning to work in a group and solve problems; learning to adopt a healthy diet and life style, including in situations of high HIV/AIDS infection rates and so on. These are some of the skills that will help children to deal effectively with future life situations. This can be done through the introduction of garden-based learning.

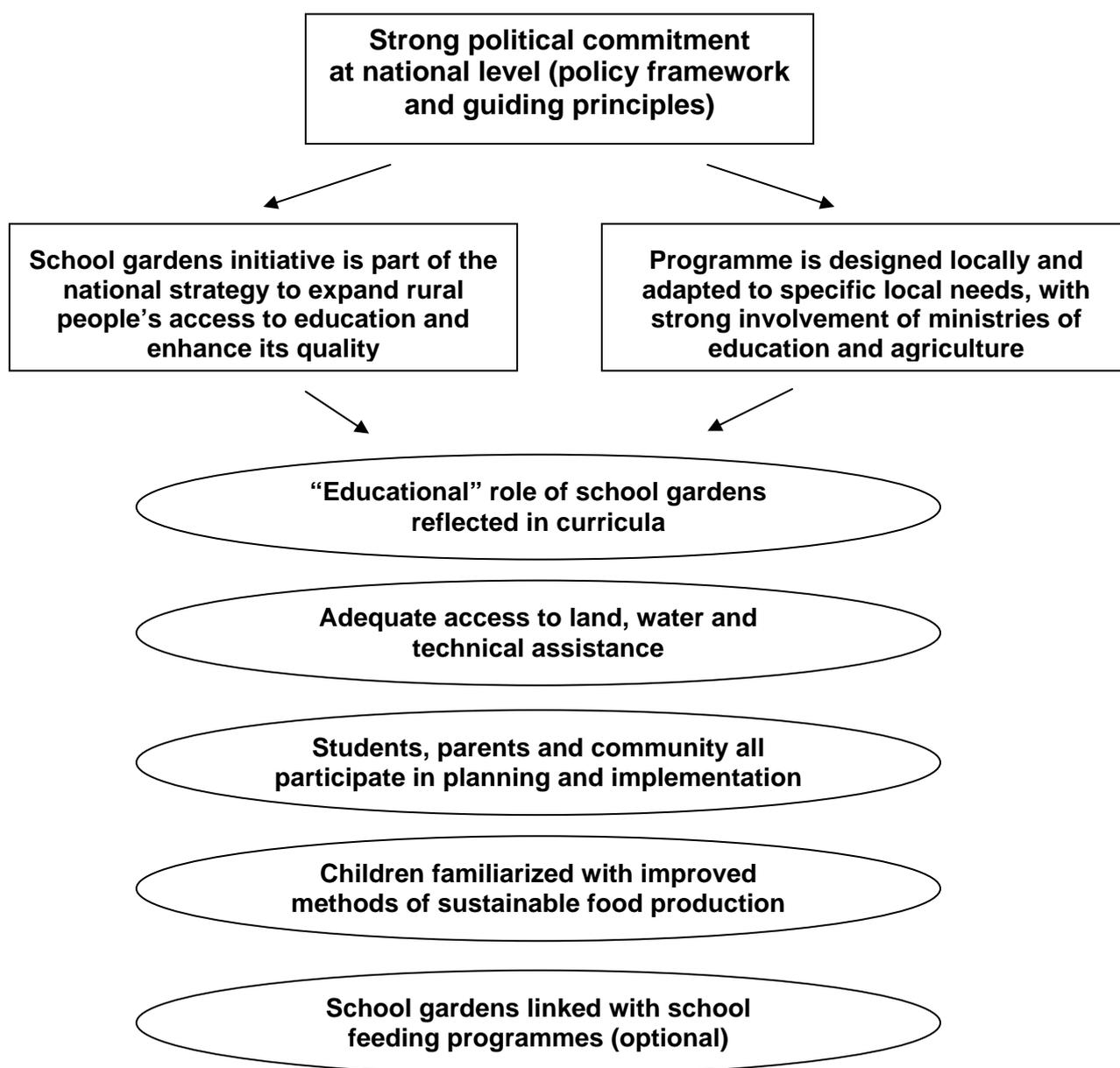
## Major Aims of School Garden Programmes

A review of school garden programmes over the past thirty years shows that the functions of school gardens can be classified as “educational” and “economic/food security”.

<b>Educational aims</b>	<ul style="list-style-type: none"> <li>• increasing the relevance and quality of education for rural and urban children by introducing into the curricula important life skills</li> </ul>
	<ul style="list-style-type: none"> <li>• teaching students how to establish and maintain home gardens and encourage the production and consumption of micronutrient-rich fruits and green leafy vegetables</li> </ul>
	<ul style="list-style-type: none"> <li>• providing active learning by linking gardens with other subjects, such as mathematics, biology, reading and writing</li> </ul>
	<ul style="list-style-type: none"> <li>• contributing to increasing access to education by attracting children and their families to a school that addresses topics relevant to their lives</li> </ul>
	<ul style="list-style-type: none"> <li>• improving children’s attitudes towards agriculture and rural life</li> </ul>
	<ul style="list-style-type: none"> <li>• teaching environmental issues, including how to grow safe food without using pesticides</li> </ul>
	<ul style="list-style-type: none"> <li>• teaching practical nutrition education in order to promote healthy diets and lifestyles</li> </ul>
	<ul style="list-style-type: none"> <li>• providing students with a tool for survival at times of food shortages</li> </ul>
<b>Economic and food security aims</b>	<ul style="list-style-type: none"> <li>• familiarizing school children with methods of sustainable production of food that are applicable to their homestead or farms and important for household food security</li> </ul>
	<ul style="list-style-type: none"> <li>• promoting income-generation opportunities</li> </ul>
	<ul style="list-style-type: none"> <li>• improving food availability and diversity</li> </ul>
	<ul style="list-style-type: none"> <li>• enhancing the nutritional quality of school meals</li> </ul>
	<ul style="list-style-type: none"> <li>• reducing the incidence of malnourished children attending school</li> </ul>
	<ul style="list-style-type: none"> <li>• increasing school attendance and compensating for the loss in transfer of “life skills” from parents to children due to the impact of HIV/AIDS and the increasing phenomenon of child-headed households</li> </ul>

## Strategic Elements Necessary for a School Garden Programme

The following figure summarizes the main policy and strategic elements that need to be taken into consideration in the design and implementation of a school garden programme. These are based on the lessons learnt from past worldwide experience in school gardening.



### Political commitment and institutionalization of the school garden programme

The possibility for establishing school garden programmes will depend on the existence of the necessary political commitment and consequent national policies to support school gardens in the country and enable the development and implementation of “garden activities” in schools. Previous attempts to establish school garden

programmes often failed to give adequate attention to the importance of the institutional framework. Institutionalization of school gardens is the key to the sustainability of these programmes. Sustainability implies independence from long-term external inputs and participation of all stakeholders (teachers, pupils, parents, school administrations, funding agencies, NGOs and ministries of agriculture, education, health, etc.).

It is important to ensure that school garden programmes are developed as part of the national effort to improve education quality and expand access to education for children in general and rural children in particular. This implies a multiplicity of factors (such as the expansion of the school network in rural areas, rehabilitation of school infrastructure, training of teaching and administrative staff, availability of learning materials, relevance of curricula, incentive for staff posted in rural areas, etc.). School gardens would ideally need to be planned as part of the National Plan of the UNESCO-led *Education for All* initiative as related components are operationalized and implemented. Governments should have a vision on how school garden initiatives can fit into the country's overall educational goals. This should be complemented by plans for financial, physical and pedagogical sustainability.

### **Responding to the local environment and location-specific needs**

There is no single model of a school garden programme that fits every situation. School garden programmes must be well adapted to local customs and needs and to the specific socio-economic, climatic and environmental situation of the country or region concerned. This is particularly important in countries in which there is a stigma attached to manual labour. The design of the programme should involve both Ministries of Education, Agriculture and Environment, at central and decentralized levels, the communities, NGOs and community based organizations (CBOs) with experience in the field, parent-teacher associations and the students themselves.

### **Strategic considerations**

#### ***Emphasize the “educational” role of school gardens***

School gardens can contribute to increasing the relevance and quality of education, improving the children's and their parents' knowledge of food production techniques and nutrition, and stimulate the development of home gardens. These achievements would together lead to an improvement in the nutritional status of the children and their families and thereby contribute to improving food security and human capital. The potential role of school gardens in improving children's practical agricultural and nutritional knowledge and “life skills” is particularly valuable in the context of child-headed households as a consequence of the HIV/AIDS epidemic.

School gardens offer a great opportunity for improving the quality of education and for learning basic life skills. Gardens can serve as a “laboratory” for the teaching of modern farming skills and nutrition, but they can also be used for practical work related to biology, environmental studies, mathematics as well as reading, writing and arts. Ensuring that school gardens achieve a significant educational impact, however, may require adjustments in the national school curriculum, the production of training materials, teacher training and the provision of funds to meet physical and human resources costs for such activity.

School garden activities can include nutrition education, food preservation techniques, integrated pest management (IPM), integrated soil fertility management, sustainable natural resource management, recycling and composting, and environmental awareness raising, especially in urban areas. This can be done by building an interdisciplinary curriculum whereby core subjects (such as mathematics, social science, biology, etc.) can be linked to practical activities, such as gardening, establishing a fruit and vegetable stand where produce is sold, small business planning, food preparation and preservation, etc. Accordingly, creating an entry point in the curriculum and developing appropriate lesson plans that link theory and practical action should be a prerequisite for the successful implementation of school-based and community gardening and nutrition education programmes.

The potential for food production *per se* in school gardens has been overemphasized in the past. The school garden will normally supply requirements only for a limited number of months or even weeks every season. The effect on increased vegetable and fruit production and on diversification of production is considered to be more indirect. Some of the school children who have participated in school gardening activities will also be interested in helping their parents and families in establishing home gardens. In this way, the multiplier effect on production within the community is likely to be more important, in terms of production, than the school garden itself.

### ***Ensure access to water and adequate technical support***

A shortage of water is reported to be a major constraint for the development of school gardens, particularly in semi-arid areas. Except where there is reliable rainfall, the development of simple irrigation systems (water points, roof catchments, etc.) for school gardens needs to be considered. Apart from increasing the reliability of harvests, irrigation enables crops to be planted at suitable times so that they come into production during school terms. In many countries with free roaming animals, the protection of the garden with fences is also indispensable. Where land availability is a problem, particularly in urban areas, there may be good opportunities for container-based cultivation and for hydroponics.

The availability of technical skills to support school gardens needs to be considered. The charging of (usually over-burdened) school teachers with extra training and supervisory responsibilities needs to be carefully assessed against other possibilities involving the community and NGOs. Public-private partnerships, including sponsorship by firms, need to be explored. One option for engaging NGOs would be to link school gardens with NGO-driven community gardens. This is useful because often expertise exists among the members of the community gardens in managing gardens efficiently and there is capacity to transfer knowledge to others. At the same time it would reduce the workload of teachers and the need to train teachers in gardening.

Many such examples exist. Women's clubs or associations running vegetable gardens can assist teachers and provide practical training courses for students. They might share in the profit of the garden produce and/or the output in general. Farmer field schools within the village may also provide a good source of the necessary technical assistance. The use of volunteer services may also be a valuable source of agricultural skills, at least in the early development of school gardens.

It is essential that the knowledge and skills imparted to the school children be technically correct and sustainable to facilitate replication in the homestead. Local

access to good quality seed or seedlings together with fertilizers and 'safe' pesticides appropriately packaged is essential to enable the technology demonstrated in the school garden to be transferred to the homestead. These inputs could be provided through the private sector or through a community based organization whose members would also require some initial training either through the Agricultural Extension Service or through a Volunteer Programme.

### ***Link school gardens with school feeding programmes***

School feeding is a powerful tool to alleviate short-term hunger and enhance children's learning capacities. School feeding also provides an incentive for parents to send or keep children at school, particularly girls. School gardens, if planned and implemented with the support of parents and the community, can complement school feeding programmes and enhance their long-term impact in terms of children's health/nutritional status and learning achievements.

The promotion of micronutrient-rich vegetables, including indigenous varieties, fruits and other foods (e.g. small livestock) in school, home and community gardens will diversify the local food base, generate income and add nutritional value to children's school meals, thus contributing to their nutritional status. As noted above, however, it is generally not possible for a school garden to generate much of the staple food required for a school feeding programme.

### ***Maximize participation of pupils, parents and community in planning and implementation***

Experience has shown that school gardening and nutrition education have a greater impact and can be sustained longer if they are part of a programme involving the whole school and linked to activities which engage parents and the community. Establishment of school gardens without the involvement of parents can create tensions within communities. Parents want their children to learn to read and write, and "ruralization" of the school curriculum is often rejected. It is essential to promote school gardens in the right context, i.e. as an applied activity with the potential for providing pupils with "life skills" and also increasing their environmental awareness, especially in relation to the conservation of natural resources (soil and water). Assisting in the creation of PTAs, where these do not exist, or supporting already established PTAs, is a constructive way to involve parents as partners in school-based gardening activities. Other good avenues for parents' effective involvement are through periodic visits to the school garden and through garden-related children's homework.

One comparative advantage of school-linked gardening is the active role that school children can learn to play in the provision of food for themselves, and in involving their parents in the learning process as opposed to being passive food recipients only. Where pupils have not been involved in the planning and management of projects and where they do not share directly in either the produce or the profits of the project, they have tended to reject the work, resulting in project failure. Children feel extremely proud and happy when the produce of their effort in the school garden is utilized for their lunches. Gardening also provides for group work experience, enjoyment in the outcome of the work done and of the acquired knowledge of agriculture and nutrition.

Misuse of school gardens and exploitation of pupils has unfortunately been a relatively common phenomenon in the past. In the reality of most rural schools, economic concerns often take precedence over teaching objectives, as poorly paid and unmotivated teachers are tempted to use the proceeds of the school farm as an additional income for themselves. This situation, coupled with an authoritarian school climate where pupils have no participation in the management of their produce, all too easily generates a teacher-pupil relationship of mutual mistrust and resentment, where pupils feel exploited as cheap labour for the teachers' benefit. This can be partially avoided by parent and community participation in the programme.

### ***Familiarize school children with improved methods for sustainable food production***

In secondary schools, in particular, the familiarization of students with up-to-date methods for improved sustainable production of food that are applicable to their homesteads or farms is a potentially powerful tool for improving the household food security.

Horticultural species, as opposed to other food crops, are of relatively high-value and have a tremendous yield potential. They can provide up to 50 kg of fresh produce per square meter per year, depending on the crops and technologies applied. Compared to other agricultural activities, horticulture makes efficient use of scarce land and water resources, thereby providing an excellent means for the application of efficient, environmentally sound and sustainable technologies.

Relatively sophisticated technology like hydroponics can also be promoted. Under hydroponics, plants can be grown closer together than in the field, thereby increasing yields, and multiple cropping can be practised. Hydroponics can conserve space, reduce pest incidence, and almost eliminate weed problems. If properly organized, surplus production can be marketed. For schools with restricted land access, hydroponics can offer good opportunities for growing a variety of vegetables, herbs and spices.

The establishment of protected cultivation in greenhouses is another option for modernizing school garden programmes in some countries. This offers exciting opportunities for teaching modern agricultural practices, including irrigation and integrated pest management, as well as water harvesting technologies.

Linkages with environmental education (e.g. through tree planting, organic production, integrated soil fertility and pest management, etc.) may also be established. Tree planting in schools can be promoted for various purposes, such as for shade, fruit production or even for harvesting of natural pesticides (e.g. *neem*). Composting and household waste management could be a useful area of learning which would also encourage community involvement.

The inclusion of training courses in bookkeeping and marketing into teaching related to school gardens, will increase business skills and contribute to an improved understanding of the economic value of small-scale agriculture.

## Main Elements of a National School Garden Programme

**1. Clear Objectives:** the objectives of a school garden programme should be well-defined, realistic and specifically tailored to the situation being addressed. The objectives may differ according to the type of school (primary, lower secondary, secondary, vocational, etc.). The type of garden eventually implemented will also depend on the objectives. The objectives should be discussed at length with all stakeholders to make sure that there is general agreement. In particular, the balance between learning and production should be clear. Parents' and students' expectations should be taken into consideration when defining the objectives.

**2. Appropriate institutional arrangements:** institutional arrangements are a very important element determining the success and sustainability of a school garden programme. Key players, including Ministries of Education, Agriculture and Environment, as well as students, PTAs, and other institutions such as NGOs and civil society organizations (CSOs) where appropriate, need to participate in programme planning and implementation as well as monitoring and evaluation. At the national level, the school garden programme contributes to address issues such as the revision of curricula, training of teachers and trainers, and legal issues such as access to land and allocation of funds. At the local level, the school garden programme, while based on the overall framework provided at the national level, would take due account of the community needs and ecological conditions through participatory processes, before implementation.

**3. Training and development of training material:** training of teachers and volunteers from the community in the planning, management and use of school gardens, and the preparation of practical guidelines and training materials, are essential elements of a successful programme. The institutions that will provide this "training of trainers" need to be determined and agreed upon from the outset of the programme. The participation of parents and members of the general community is key to successful school garden development and management and should be encouraged. Mechanisms for twinning the school gardens with local farmers who have gardening expertise, as well as with women's, youth or community groups, should be identified and developed. Possibilities for eventually twinning school gardens with garden-based farmer field schools in the community, or with schools in industrialized countries, should also be investigated and fostered to the extent feasible.

**4. Adjustment of curricula to ensure time and proper integration of school gardening and related activities:** school gardens may be part of regular curricular activities or extra-curricular activities. However, such options might differ from country to country and will reflect national priorities and choices related to the curricula. Basic subjects such as reading, writing, mathematics, science and arts can profit from the presence of a school garden and render the learning of these subjects more interesting for the children. Learning activities directly related to crop production (or small animal husbandry, fish culture, etc.), as well as nutrition, can be integrated as appropriate into general science and nature studies.

**5. Land and water development and school garden operations:** budgetary support towards the cost of land development such as fencing, drainage and small-scale irrigation needs to be calculated. The legal aspects related to these investments

should be clearly spelled out (property and user rights, maintenance obligations, etc.). Elements of school garden operation and upkeep need to be identified and calculated. The project should envisage a clear process gradually leading to the material and financial sustainability of the school garden programme. This could take one or two years depending on the situation, and may need government support during this period. However, an “exit strategy” for the government’s support needs to be identified.

**6. Budgetary provisions:** a national school garden programme, ideally supplementing an established ongoing school feeding programme, will entail the following costs, at a minimum:

Core programme costs:

- technical assistance to the Ministries of Education and Agriculture to integrate school gardening and associated nutrition education activities into the school curriculum;
- start-up workshops and workshops to review curricula and to identify opportunities for integration of school gardening activities and associated nutrition education;
- planning and assessment workshops at national and local levels;
- preparation of teachers’ and pupils’ materials on gardening and nutrition;
- training of trainers, teachers, local extension workers and community facilitators.

Physical inputs for each school’s garden:

- tools, seeds, fertilizers and non-toxic plant protection products and materials;
- materials for small-scale irrigation where rainfall is not reliable (pedal pumps, water reservoirs, piping or drip irrigation tubing, etc.);
- secure, weatherproof garden sheds and durable, animal-proof fencing;
- animal housing and other materials necessary if small animal husbandry is included;
- manuals and other educational materials.

**7. Monitoring and evaluation:** All stakeholders involved in the planning and implementation of school gardens should be involved in the monitoring and evaluation process. This applies to the national, regional, and local level and includes community involvement, and especially parents (e.g. through PTAs). Technical advice on garden development and management could come from local agricultural extension services, NGOs and CSOs such as farmers’ organizations, as well as nearby farmer field schools which may include parents of students at the school. A school garden programme in support of household food security within the context of FAO’s Special Programme for Food Security, ideally linked to nearby farmer field schools, can readily benefit from the monitoring and evaluation system that will already be in place for the SPFS.

## Key Partners in the Development of a School Garden Programme

Within **FAO**, the key services involved in current school gardens activities are:

- *SPFS Management and Coordination Service (TCOS)*: Special Programme for Food Security and TeleFood, both of which have school garden components/projects;
- *Extension, Education and Communication Service (SDRE)*: extension, education, communication and youth. The service is also leading the FAO/UNESCO flagship partnership programme on “Education for Rural People”;
- *Nutrition Programmes Service (ESNP)*: school nutrition education; collaboration with the World Health Organization (WHO) and the Pan American Health Organization (PAHO) in the “Global Health-Promoting Schools Initiative”;
- *Crops and Grassland Service (AGPC)*: seeds, integrated production and protection (IPP) methods, crop selection, small scale horticulture, micro-gardens, hydroponics; taking the technical lead in collaboration with WFP;
- *Plant Protection Service (AGPP)*: Integrated Pest Management, farmer field schools;
- *Animal Production Services (AGAP)*: increasing productivity of livestock, especially poultry and smallstock; promotion of community and school flocks for increased community self-reliance and as a focus for demonstrations and retaining skills and knowledge.
- *Forest Conservation, Research and Education Service (FORC)*: school tree-planting and other forestry education projects, an important environmental education function for numerous schools;
- *Population and Development Service (SDWP)*: mitigation of the impact of HIV/AIDS; junior farmer life schools;
- *Emergency Operations Service (TCEO)*: combined school feeding/school garden projects within the framework of emergency relief and rehabilitation.

### Other UN organizations and inter-institutional linkages

Cooperation between different UN System organizations will increase the outreach and effectiveness of school garden programmes. Means of cooperation at country level may include:

- Joint planning, i.e. involvement of partner UN organizations and relevant national and international NGOs in programme formulation (avoiding duplication and overlapping);
- Joint selection of beneficiaries (building on vulnerability assessments of different agencies);
- Joint implementation, making use of complementary technical expertise, organizational structures and logistics (reducing overhead costs);
- Presentation of a comprehensive interdisciplinary approach to the government (facilitating cooperation with ministries which are relatively new partners to FAO, e.g. ministries of education);

**WFP** has had school gardens associated with its school feeding programmes in a number of countries. A novel partnership is currently being forged by FAO and WFP to expand the number of schools and countries linking school gardens with school feeding programmes. This synergistic collaboration will build on the complementary

strengths and capacities of the two organizations. FAO can provide technical expertise and backstopping in the area of horticulture, school gardens, community gardens, urban and peri-urban agriculture and HIV-impact mitigation. The organization may furthermore enhance medium and long term programme sustainability through linkages to FAO-assisted medium and long term national agricultural development programmes and unilateral trust funds. WFP enters the partnership with extensive experience in initiating school canteens and PTAs for school feeding, an efficient logistics network to provide general commodities and materials to schools, as well as the organization's capacity to support community involvement and casual labour through food for work schemes. A number of countries have been identified for inclusion in pilot and expansion phases of the partnership programme. Efforts are under way to plan and implement a programme of pre-pilot activities, initially using existing resources (e.g. TeleFood, etc.), as well as pilot programmes funded by FAO's Technical Cooperation Programme (TCP). Funding support from donors to implement a medium-term programme is being sought.

The school garden initiative is related also to the global flagship partnership programme on "Education for Rural People (ERP)" led by FAO in collaboration with **UNESCO** and launched in 2002 during the World Summit on Sustainable Development. The ERP initiative, which includes among its partners governments, international organizations, civil society, the media, and the private sector, aims at expanding access to quality basic education for rural people. ERP includes formal and non formal education, and, specifically, primary and basic secondary education, as well as literacy and basic skill training for youth and adults. ERP is one of nine flagship programmes of the Education for All global initiative and one important aspect of the International Alliance Against Hunger. School gardens can contribute to achieving the aims of the ERP initiative and can benefit from the existence of such a framework.

In addition to partnership programmes with WFP and UNESCO described above, other school programmes of UN System organizations include the UNICEF "Child Survival and Development Programme" (water, tools and inputs, teaching materials, health and nutrition), and the UNESCO "Associated School Project Network" (ASPnet). Launched in 1953, the ASPnet is a worldwide network grouping children and young people from 5 000 schools in 154 countries. Furthermore WHO promotes life skills and school gardens within its "Global School Health Initiative". FAO and UNICEF jointly promote school gardens and provide nutritional care and support for HIV/AIDS orphans and other vulnerable children. CGIAR centres such as IFPRI and ICRAF, the International Centre for Child Health, the World Bank, and the UN University also have school programmes.

The "Partnership for Child Development" was established in 1992 to help coordinate global efforts to assess the developmental burden of ill health and poor nutrition at school age. It brings together a consortium of countries, donor organizations and centres of academic excellence to design and test strategies to improve the health and education of school-age children. The Partnership has international agency support from UNDP, WHO, UNICEF, The World Bank and British DFID, and is sustained through support from participating governments, the Rockefeller, Edna McConnell Clark and James S. McDonnell Foundations and the Wellcome Trust. One of the tasks of the programme is to examine the content, coverage, effectiveness and cost of school feeding programmes and school gardens.