



# Profiting from Cleaner Production Checklists for Action



United Nations Environment Programme  
Division of Technology, Industry and Economics



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UNITED NATIONS ENVIRONMENT PROGRAMME  
DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

39-43 quai André Citroën  
75739 Paris Cedex 15 - France  
Tel: +33 1 44 37 14 50  
Fax: +33 1 44 37 14 74  
E-mail: [unep.tie@unep.fr](mailto:unep.tie@unep.fr)

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## Background

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Cleaner Production is the continuous application of an integrated preventive environmental strategy to processes, products and services to increase overall efficiency and reduce risks to humans and the environment. Cleaner Production can be applied to the processes used in any industry, to products themselves and to various services provided in society.

Prevention is better business than allowing inefficiency to result in losses. The Cleaner Production community knows and affirms this, but most sources of investment financing remain unaware or unconvinced. While Cleaner Production has made tremendous headway in the engineering community in the last ten years, financing is often seen as one of the main constraints on its wider practice.

However, there has been some progress in this area. Research initiatives have multiplied on issues related to sustainable finance, donor agencies have launched demonstration projects, and special financial mechanisms for Cleaner Production investment have emerged in a number of countries in recent years.

In addition, financial markets are becoming more sensitive on environment and sustainability. Costs of capital depend mainly on the results of assessments of expected risk and return, and issues related to sustainability influence both risk and return. There is also recent evidence that institutional investors increasingly support sustainability.

## Profiting from Cleaner Production: Checklists for Action

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A checklist is a list of actions to take or items to verify. It helps the user to obtain more information or to make evaluations or judgements.

The checklists here are designed for:

**Implementers** - Enterprises considering or using Cleaner Production approaches;

**Investors** - Banks and other financial institutions that may consider funding Cleaner Production projects;

**Facilitators** - Promoters or supporters of Cleaner Production: Government, non-governmental organizations, consultants and the media.

## Adding to or adapting the checklists

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All the checklists are available on the UNEP DTIE website at: [www.uneptie.org/pc/cp](http://www.uneptie.org/pc/cp), so users can personalize them by, for instance:

- Including the name of an organization
- Adding sections or points
- Including findings or recommendations

The need for these checklists emerged during the implementation of Norwegian-funded UNEP/DTIE project "Strategies and mechanisms for promoting Cleaner Production investments in developing countries". They are intended as support instruments to guide users in government, private and public industry and the financial community in their decision making.

## A Barriers to Cleaner Production checklist

**Objective:** The purpose of this checklist is to help identify constraints at national or industry level on implementing Cleaner Production. In many cases, individual enterprises cannot change such constraints on their own. The final list of “Yes” answers provides a profile of the barriers that any individual enterprise, government body or finance provider may face. The columns under “Response” are to be filled in by the user of the checklist.

	ISSUE	RESPONSE	
		YES/NO	ACTION OR RECOMMENDATION
Economic/Financial	1. Lower cost-effectiveness of Cleaner Production investments, compared with other investment opportunities, given present resource prices		
	2. Perception that such investments carry a higher financial risk because of Cleaner Production’s innovative nature		
	3. The dominance of the pollution control industry, which makes it difficult for Cleaner Production to get established		
	4. High cost of external capital for Cleaner Production investments in industry		
	5. Higher initial costs of some Cleaner Production technologies make them harder to sell to smaller enterprises than the “traditional” technologies		
	6. Lack of funding mechanisms and lending programmes appropriate for Cleaner Production investments		
	7. Lack of interest on the part of financial institutions in financing projects requiring only small amounts of finance		
	8. Difficulty in evaluating the economic soundness of Cleaner Production projects leading to reluctance to fund them even when their financial benefits are proven		
	9. Failure to consider the value of Cleaner Production in evaluation procedures for lending, equity participation, etc.		
	10. Competing demands for scarce resources make it difficult to consider longer-term Cleaner Production investments even when the benefits are known		
Enterprise	<b>Environment</b>		
	1. Lack of leadership on environmental issues		
	2. Lack of real concern for environmental problems at plant and management level		
	3. Traditional “end-of-pipe” pollution control philosophy on the part of many managers		
	4. Lack of incentives for managers to work on implementing Cleaner Production activities		

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	ISSUE	RESPONSE	
		YES/NO	ACTION OR RECOMMENDATION
<b>Enterprise</b>	5. General resistance to change: Pollution control techniques and technologies are typically simpler to understand and thus easier to use on existing production processes		
	<b>Cleaner Production projects</b>		
	1. Too few demonstration projects in relevant sub-sectors or locations to illustrate the benefits of Cleaner Production		
	2. General immaturity of the organization structure and of the management and information systems		
	3. Limited experience with employee involvement and project work		
	4. Lack of a sound operational basis with well-established production practices, maintenance systems, etc.		
	5. Perception that Cleaner Production is complex (e.g. that it requires comprehensive assessment to identify appropriate opportunities)		
	6. Limited access to equipment to support Cleaner Production		
<b>National/Government</b>	1. Immaturity of the environmental policy framework		
	2. Enforcement activities that tend to be weak, thus putting no real pressure on enterprises		
	3. Authorities that tend to favour pollution control approaches as the standard for regulatory compliance		
	4. Too narrow interpretation or misunderstanding of the Cleaner Production concept		
	5. Insufficient focus on Cleaner Production in trade and industry development strategies		
	6. Limited accessibility of reliable technical information tailored to the company's needs and assimilative capacity		
	7. Immaturity of the internal cost calculation and cost allocation practices		
	8. Immaturity of the internal capital budgeting and capital allocation procedures		
	9. Macroeconomic and social policies (e.g. energy pricing regimes and subsidies for uneconomic industries) that discourage Cleaner Production		
	10. Insufficient research and development initiatives in new Cleaner Production technologies		



## B Cleaner Production implementation checklists

### B1 Scope for Cleaner Production

**Objective:** The need for Cleaner Production can be signalled in many ways, not all of them immediately apparent. The objective of this checklist is to highlight situations that demonstrate scope for Cleaner Production.

SITUATION		YES/NO	FOLLOW-UP
<b>Enterprise</b>	<b>In the flow of operations</b>		
	1. Disorganized flow – great effort in some locations, little in others		
	2. Considerable rehandling of materials in a given condition		
	3. Slow progress of materials through the production processes		
	4. Disorganized work methods and clerical work flow		
	5. Cramped or inconveniently located service departments		
	6. Excessive scrap and reworking of production		
	7. Failure to meet delivery deadlines		
	8. Excessive number of back orders or rush orders		
	9. Excessive overtime		
	10. Sub-standard output quality		
	<b>In material handling and storage</b>		
	1. Considerable manual handling of heavy material		
	2. Inadequately numbered, identified and/or protected supplies		
	3. Crowded/congested stores and aisles		
4. Handling of single units rather than full loads			
5. Frequent damage or loss of materials in handling			

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	SITUATION	YES/NO	FOLLOW-UP	
Enterprise	6. Need to transport materials long distances on site			
	7. Excessive or unbalanced inventories or stocks of raw materials			
	<b>In accounting and reporting</b>			
	1. Lack of budgetary control system and/or costing system			
	2. Difficulty valuing work in progress and/or finished goods			
	3. Inadequate/unreliable cost accounting information			
	4. Lack of operations information (e.g. bills of material, operations lists, machine loadings)			
	5. Poor filing systems and difficulty finding documents			
	6. Lateness of financial reports to management/owners			
	7. Non-existent or ad hoc capital investment programme			
	Government	1. Environmental regulations that do not always take into account Cleaner Production		
		2. Lack of availability of up-to-date information of Cleaner Production practices and technologies addressing specific local, regional or national needs		
		3. Not enough awareness campaigns on the benefits of Cleaner Production for financial institutions		
		4. Lack of promotion of training and skills development courses on Cleaner Production for employees at various industry levels		
		5. Insufficiently developed Cleaner Production advisory services		
6. Non existent or not sufficient special incentives for Cleaner Production adoption (e.g. tax breaks) and/or penalties for non compliance (negative externalities)				
7. Yet to be developed indicators to measure progress in the adoption of Cleaner Production				
8. Not sufficient development of Cleaner Production demonstration projects in various industrial sub-sectors, particularly in small and medium-sized enterprises				

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	SITUATION	YES/NO	FOLLOW-UP
<b>Government</b>	9. Insufficient promotion of Cleaner Production as a main topic in financial and business management courses		
	10. Cleaner Production consultancy as a new profession is not encouraged enough		

## B Cleaner Production implementation checklists

### B2 Cleaner Production enterprise strategy options

**Objective:** This checklist gives the generally accepted options for implementing Cleaner Production measures, with those that are easiest to implement or lowest in cost topping the list.

OPTION	WORTH CONSIDERING	ACTION
<p><b>1. Good Housekeeping</b> Take action to prevent leaks and spills, develop preventive maintenance, improve equipment inspections and enforce existing working instructions through proper supervision and training.</p>	Yes, always	
<p><b>2. Input Material Substitution</b> Replace usual inputs with less toxic and/or renewable materials, and usual lubricants, coolants, cleansing agents, etc., with those that have a longer service lifetime.</p>		
<p><b>3. Improved Process Control</b> Modify working procedures, such as machine instructions and process record keeping, to run processes more efficiently and reduce waste and emission generation rates.</p>		
<p><b>4. Equipment Modification</b> Modify existing equipment and support utilities to improve processes and reduce waste and emission generation rates.</p>		
<p><b>5. Technology Change</b> Replace existing technologies, processing sequences and/or synthesis pathways so as to minimize waste and emission generation.</p>		
<p><b>6. On-site Recovery/Reuse/Recycle</b> Reuse waste materials in the same production process or elsewhere in the enterprise or group.</p>		
<p><b>7. Production of Useful By-products</b> Transform waste into a useful by-product to be sold as input for companies in other sectors.</p>		
<p><b>8. Product Reformulation</b> Change the characteristics of the product to minimize the environmental impacts of its production, use and/or disposal.</p>		

## B Strategy and capacity-building checklists

### B3 Government intervention to promote Cleaner Production investment

**Objective:** The purpose of this checklist is to help identify practical ways that central and local government can encourage investment in Cleaner Production.

	ALREADY IN PLACE	CONSIDER OR INTRODUCE
<b>Main activities</b>		
1. Introduce appropriate legislation, including taxation and financial instruments.		
2. Ensure effective enforcement.		
3. Provide economic incentives.		
4. Encourage voluntary agreements.		
5. Build local skills and support capacity.		
6. Spread understanding of Cleaner Production concepts.		
7. Provide demonstration projects.		
8. Initiate information and promotion programmes.		
9. Help overcome financial constraints.		
<b>Selected additional activities</b>		
1. Develop comprehensive Cleaner Production programmes for the country/region/locality.		
2. Formulate and improve national/regional/local policies to promote Cleaner Production.		
3. Promote Cleaner Production at political level and develop policies to promote it.		
4. Develop Cleaner Production declarations for signature at ministerial level.		
5. Publicise Cleaner Production concepts among decision makers.		
6. Develop environmental criteria for economic cooperation and technology introduction.		
7. Require waste minimization assessment and regular reports to government authorities.		
8. Provide grants for pilot testing of Cleaner Production technology.		
9. Require better consumer information.		
10. Tackle trade conflicts associated with Cleaner Production.		
11. Develop awareness and application of Cleaner Production in small and medium- sized enterprises.		
12. Make information on Cleaner Production readily available (e.g. ensure that newsletters and bulletins on Cleaner Production are widely distributed).		
13. Support and finance research and development in Cleaner Production technology.		
14. Support Cleaner Production through export promotion programmes.		

## C Cleaner Production investment proposal checklists

### C1 Cleaner Production investment data sources

**Objective:** The aim of this checklist is to identify sources of information, which will help in:

- Identifying Cleaner Production options
- Providing information for investment proposals

DEPARTMENT	INFORMATION SOURCES
1. General Management	<ul style="list-style-type: none"> <li>• Organizational charts</li> <li>• Information on available investment funds</li> </ul>
2. Accounting & Finance	<ul style="list-style-type: none"> <li>• Cost accounting reports for departments, activities, products, etc.</li> <li>• Overhead account information</li> <li>• Department and project budgets</li> </ul>
3. Purchasing	<ul style="list-style-type: none"> <li>• Raw material invoices and delivery records</li> <li>• Material data sheets</li> <li>• Energy bills</li> <li>• Water bills</li> <li>• Waste transport/recycling/disposal invoices</li> <li>• Vendor contact information</li> </ul>
4. Material Control & Inventory	<ul style="list-style-type: none"> <li>• Raw material inventory records</li> <li>• Final product inventory records</li> <li>• Material handling records</li> </ul>
5. Operations	<ul style="list-style-type: none"> <li>• Process maps/descriptions</li> <li>• Equipment operating manuals</li> <li>• Equipment energy use ratings</li> <li>• Work orders and job sheets</li> <li>• Batch recipes and other product specifications</li> <li>• Production schedules</li> <li>• Material ordering tickets</li> <li>• Production logs</li> </ul>
6. Quality Control	<ul style="list-style-type: none"> <li>• Product specifications</li> <li>• QC and product reject data</li> </ul>
7. Sales & Marketing	<ul style="list-style-type: none"> <li>• Invoices to customers</li> </ul>
8. Shipping	<ul style="list-style-type: none"> <li>• Shipping records</li> </ul>
9. Maintenance & Engineering	<ul style="list-style-type: none"> <li>• Facility blueprints and schematics</li> <li>• Equipment lists, specifications and data sheets</li> <li>• Maintenance procedures and records</li> </ul>
10. Environment, Health & Safety	<ul style="list-style-type: none"> <li>• Emission/waste technical analyses</li> <li>• Emission/waste volumes</li> <li>• Sewer discharge records</li> <li>• Recycling records</li> <li>• Waste shipment records</li> <li>• Regulatory compliance reports</li> <li>• Data on environmental penalties and fines</li> <li>• Data on environmental clean-up costs</li> <li>• Permitting cost estimates</li> <li>• Waste management labour costs</li> <li>• Pollution control equipment information</li> <li>• Future regulatory compliance costs</li> </ul>
11. Legal	<ul style="list-style-type: none"> <li>• Environmental legal costs</li> </ul>
12. Research & Development	<ul style="list-style-type: none"> <li>• Future environmental and cost trends</li> </ul>

*Note: This checklist is meant to be illustrative. The availability and location of different types of data can vary widely from enterprise to enterprise.*

## C Cleaner Production investment proposal checklists

### C2 Cleaner Production investment decisions: Detailed cost checklist

**Objective:** This checklist breaks down costs that can affect decisions on investing in Cleaner Production.

COST		COST	
<b>Planning/engineering (including materials, labour)</b>		<b>Working capital</b>	
• Planning		• Raw materials inventory	
• Design/engineering		• Product inventory	
• Accounting		• Accounts receivable/payable	
• Procurement		• Taxes payable	
<b>Permitting (including materials, labour, permit fees)</b>		• Cash	
• Siting permits		<b>Utilities/connections (including materials, labour)</b>	
• Construction permits		• Electricity	
• Environmental permits		• Fuel	
• Contractor/consultant fees		• Heating	
<b>Site preparation (including materials, labour)</b>		• Cooling/refrigeration	
• Land purchase		• Water	
• Equipment rental		• Steam	
• Demolition and clearing		• Sewerage	
• Old equipment/rubbish disposal		• Plant air	
• Grading, landscaping		• Inert gas	
• Building construction		<b>Training (including materials, labour)</b>	
<b>Equipment purchase (including taxes, delivery, insurance, installation)</b>		• Operations training	
• Process equipment		• Safety/environmental training	
• Monitoring equipment		Costs for the first operating week (cannot always be ascertained )	
• Protective/safety equipment		<b>Shut-down/Start-up costs</b>	
• Materials handling equipment		• Test runs	
• Storage equipment		<b>Contingency fund</b>	
• Laboratory equipment		<b>Salvage value</b>	
• Transport equipment			
• Waste handling equipment			
• Rework/recycling equipment			
• Waste treatment equipment			
• Initial spare parts			

## D Cleaner Production funding checklists

### D1 Funding options

**Objective:** The aim of this checklist is to help identify sources of funding. An example of a funded project is also provided.

TYPE OF FUNDING SOURCE	OPTION? (YES/NO)	USED
<b>Close to home</b>		
• Internal finance sources – self financing		
• Loans from owners or other stakeholders		
• Credit from other trade associates such as suppliers or customers		
<b>Equipment-related</b>		
• Credit from equipment supplier		
• Lease finance		
<b>Bank</b>		
• Credit terms from banks		
• Loans from own bank		
• Loans from other banks		
<b>Government and other</b>		
• Grants and/or loans from government bodies		
• Preferential funding sources – environmental credit lines		
• Venture capital funds		
• Other		

#### EXAMPLE OF FUNDING

JOB SPECIFICATION	CONTRACTOR	COSTS	SOURCE
Designing works for steam boiler installation	X Company	2 375 USD	Self
Equipment: Steam boiler VAPOR TTK-60 Fittings (direct from the boiler) Oil burner OILON RP-140M Boiler feeding pump CR4-120 Oil pumps Allweiler SPF-20-38 (2 units)	X Company	35 225 USD 5 312 USD 13 650 USD 1 300 USD 2 800 USD	Soft loan from NEFCO
Extended smoke channel to chimney	X Company	1 500 USD	Self
Assembling of boiler, electrical-automation part, pipelines and isolation works; start-up – adjustment works	X Company	11 450 USD	Soft loan from NEFCO
<b>Sub-total</b>		<b>73 612 USD</b>	
<b>Contingency costs (10%)</b>		<b>7 361 USD</b>	
<b>TOTAL</b>		<b>80 973 USD</b>	



## D Cleaner Production funding checklists

### D2 Funding application format

**Objective:** This checklist gives the suggested contents of a typical Cleaner Production funding application. It is not meant to serve as a “standard format” for a Cleaner Production loan application.

CONTENT	CHECK
<b>Cover sheet</b> A one-page summary of the project (see example on the next page)	
<b>Background</b> Company name, type and level of production, annual turnover, etc. (with audited balance sheet and profit-loss statement as appendices)	
<b>Project description</b>	
a) Current facilities	
b) Ownership of the enterprise	
c) Proposed project (rationale, justification and explanation, project objectives quantified: cost savings, environmental improvements, market, etc. )	
<b>Project costs</b>	
a) Expected total investment costs, including contingency fund (approximately 10%)	
b) Total investment costs broken down by main contractors, including local works	
c) Pre- and post-operating costs (changes in operating and maintenance costs due to project implementation), including taxes (separately), interest, etc.	
d) Financial costs summary (external and self-financing) and payback period	
<b>Project implementation</b>	
a) Summary of plans for project implementation, monitoring and management arrangements	
b) Names and responsibilities of main parties	
c) Financing/lending disbursement plan	
d) Expected start-up and termination dates (state concrete action or documentation required according to the contract, when applicable)	
e) Schedule of activities (main delivery dates)	

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CONTENT	CHECK
<b>Project impact on environment, health and safety</b>	
a) Mitigation of environmental impacts arising from project implementation	
b) Compliance/permits from regulatory authorities, and mode of environmental review	
c) Statement on environmental, health and safety screening conducted during project preparation and finalized during project appraisal and on environmental, health and safety issues associated with the project	
d) Proof of compliance with international standards	

**COVER SHEET**

A one-page summary of the project

<b>Applicant</b> .....	(name of enterprise)
<b>Project title</b> .....	Modernization of boiler house
<b>Sector covered</b> .....	Energy/district heating
<b>Project impact:</b> .....	100 GWh/y saved
.....	Annual reduction of:
	130 000 t CO <sub>2</sub> emission
	10 t dust emission
	150 t SO <sub>2</sub> emission
<b>Project duration</b> .....	4 months
<b>Total cost</b> .....	Capital ——— USD
.....	Operating ——— USD
<b>Proposed bank financing</b> .....	Capital ——— USD
<b>Other financing (name resources)</b> .....	Capital ——— USD
<b>Cost-effectiveness (internal rate of return)</b> ...	10%
<b>Payback period</b> .....	years/months

## D Cleaner Production funding checklists

### D3 Checklist for bankers on Cleaner Production issues

**Objective:** This checklist can be used, in conjunction with normal funding application documentation, when reviewing Cleaner Production funding applications. For major funding requests, a “yes” should be backed up by documents or systems examples. For negative answers, the additional credit and other risks should be specified. If Cleaner Production funding is being given special preference, negative answers may need to be reconsidered.

CRITERIA MEASUREMENT QUESTION	YES	NO
1. Have formal investment criteria been defined when developing the investment proposal?		
2. Has the investment decision-making process considered:		
• Short- and long-term Cleaner Production impacts of the expenditure?		
• Business as well as Cleaner Production justifications?		
• Cleaner Production benefit realization and result measurement?		
• Relevant environmental laws and regulations plus measures taken to assure compliance?		
3. Do those making the investment decision have:		
• Knowledge of Cleaner Production solutions on the market?		
• Experience in purchasing this type of equipment or service?		
• Undertaken basic feasibility studies?		
• Confirmed supplier reliability and responsibilities?		
4. Will a formal legally binding document exist for any purchase of Cleaner Production technology or services?		
5. Is there clear management accountability for tracking and controlling Cleaner Production expenditure?		
6. Are experienced and skilled staff available to implement or use the Cleaner Production methodology or equipment?		
7. Have implementation milestones and reviews been incorporated into the Cleaner Production funding application?		

## D Cleaner Production funding checklists

### D4 Information needs of banks and credit institutions when evaluating applications for finance

**Objective:** In addition to specific information on a Cleaner Production investment proposal, banks require more general information on the borrowers and their ability to repay. The aim of this checklist is to identify the main questions or issues that banks will likely want to address so they can evaluate whether the borrowing enterprise is well-managed.

	AVAILABLE
<i>Written information will be needed. Make sure you have the facts and documents available.</i>	
<b>1. Business or enterprise</b>	
• Date established	
• Location, short history, structure	
• Names and short biographies of owners	
<b>2. Key management</b>	
• Age, experience and qualifications of senior management	
• Organization chart showing responsibilities	
<b>3. Marketplace</b>	
• Position locally, main competitors, description of products/services	
• Level of technology (include brochures)	
<b>4. Financial position and performance</b>	
• Current assets and liabilities	
• Latest financial accounts, up-to-date figures on debtors, creditors and work in progress	
• Inventories, other loans, bank balance	
<b>5. Business plan</b>	
• Objectives to be met with the funds to be borrowed	
• Expenditure budget and cash budget	
<b>6. Funds required</b>	
• How much and when, showing appropriateness for business size	
• Margin for error and change in circumstances	
• Break-even for profitability and cash	
<b>7. Structure of required finance</b>	
• Short, medium or long term needs	
• Export finance requirements	
<b>8. Available collateral</b>	
• Assets already pledged (collaterals) for other loans	
• Assets available as collateral for this loan	
<b>9. Repayment issues</b>	
• Starting date and overall plan	
• Repayment plan	

## D Cleaner Production funding checklists

### D5 Checklist for credit officers on Cleaner Production issues

**Objective:** The aim of this checklist is to guide those evaluating applications for Cleaner Production funding in verifying statements made about Cleaner Production.

	YES/NO	FOLLOW-UP
<b>Question 1:</b>		
<p><b>Has the enterprise published an environmental policy statement, and is this investment part of the strategy described therein?</b></p> <p><b>Objective evidence:</b> Published environmental policy statement dating from before the financial assistance application was made.</p> <p><b>Reason for question:</b> If the enterprise has environmental protection and Cleaner Protection as part of its mission statement, it is aware of the issues. The investment application is thus likely to be genuine rather than a cover for a more general funding arrangement.</p>		
<b>Question 2:</b>		
<p><b>In previous applications for financial support for non-Cleaner Production projects, did the enterprise make any reference to environmental impact or environmental good practice?</b></p> <p><b>Objective evidence:</b> Previous financial assistance applications.</p> <p><b>Reason for question:</b> If environmental protection and Cleaner Protection have been part of the enterprise's mission for a while, you would expect this to be reflected in earlier applications or other bank/customer relations records.</p>		
<b>Question 3:</b>		
<p><b>Does the application clearly identify the Cleaner Production elements within the application?</b></p> <p><b>Objective evidence:</b> Cleaner Production and environmental protection items identified and costed within the application.</p> <p><b>Reason for question:</b> Most applications will give a mix of economic and environmental justification for the investment. However, there should be clear evidence of the specific justification for Cleaner Production investments, where the criteria, options considered, opportunity costs, time horizons and discount rates will be different.</p>		
<b>Question 4:</b>		
<p><b>Where relevant, does the application recognize and provide for indirect Cleaner Production environmental costs, such as landscaping, waste disposal, decommissioning and abandonment?</b></p> <p><b>Objective evidence:</b> Identified items costed within the application.</p> <p><b>Reason for question:</b> For a project to be judged as environmentally friendly, all impacts of the investment should be considered. Some will be up-front costs such as landscaping, others will occur during operations and still others, such as decommissioning, at the end of the project life. Such costs should be addressed in the application.</p>		

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	YES/NO	FOLLOW-UP
<b>Question 5:</b>		
<p><b>Does the applicant have accounting and environmental measurement systems in place to monitor and report on the expected financial benefits and savings used in justifying the application?</b></p> <p><b>Objective evidence:</b> Description of systems and example of sample reports.</p> <p><b>Reason for question:</b> Established accounting processes are evidence that the applicant can measure how well, and by how much, the introduction of Cleaner Production benefits it. They also add credibility to the financial figures included in the application.</p>		
<b>Question 6:</b>		
<p><b>Does the application refer to:</b></p> <ul style="list-style-type: none"> <li>• Requirements of national environmental laws?</li> <li>• Local laws and regulations?</li> <li>• State tax allowances and benefits?</li> </ul> <p><b>Objective evidence:</b> Contents of application.</p> <p><b>Reason for question:</b> Failure to refer to laws and regulations by name and number may imply that the applicant is unfamiliar with the legislation, which would put the investment at risk.</p>		

## D Cleaner Production funding checklists

### D6 Risks in lending to smaller businesses

**Objective:** Extending credit to small and medium-sized enterprises can entail additional exposure and risks, compared with those involved in lending to larger enterprises. This checklist presents some of the main risk areas and gives an example of each.

TYPE OF RISK	EXPOSURE	CONTROL
<b>1. Overall business</b>		
Does the enterprise have an established history and experience in its current or proposed business related to the investment proposal?		
<b>2. Nature of activity</b>		
Do the enterprise and its activity carry an inherently high environmental risk?		
<b>3. Legal and regulatory</b>		
Is the enterprise registered and does it operate within relevant laws and regulations? Does it know about any emerging legislation?		
<b>4. Information</b>		
Can the enterprise provide complete and credible information on its operations and financial position?		
<b>5. Systems operations and transactions</b>		
Does the enterprise have business operational systems to control?		
<b>6. Skills and capacities</b>		
Does the enterprise have people with the skills and knowledge to lead and manage the enterprise properly? Does it have staff knowledgeable of Cleaner Production?		
<b>7. Collateral</b>		
Is the enterprise the real registered owner of the property it wishes to offer as collateral?		
<b>8. Financial capacity</b>		
Is the small enterprise co-financing in any way the Cleaner Production investment it is seeking external funds for? Or is it applying for 100%?		

## E Complementary tools for further improvement of environmental performance

**Objective:** Cleaner Production has close links with the field of environmental management, as well as with other approaches and techniques that can be applied to improve the environmental performance of any enterprise. The objective of this checklist is to identify these and consider their relevance to a given enterprise.

MANAGEMENT TOOL	USED (YES/NO)	MORE INFORMATION REQUIRED
<p><b>1. Environmental auditing</b> Systematic, documented, periodic and objective evaluation of how well a project, organization, management and equipment are performing, with the aim of helping safeguard the environment.</p>		
<p><b>2. Environmental technology assessment</b> Can be used by technology suppliers, developers, importers and exporters, plus local communities and non-governmental organizations. Typically includes:</p> <ul style="list-style-type: none"> <li>• Assessing the environmental impact of a given technology</li> <li>• Selecting among technology options</li> <li>• Improving design of a technology</li> <li>• Identifying ways to mitigate negative effects of a technology</li> </ul>		
<p><b>3. Environmental Management Accounting</b> A method for evaluating the true environmental costs, often hidden, of operating a business so that these costs can be considered in business decisions.</p>		
<p><b>4. Environmental Management Systems</b> Part of the overall management system that includes organizational, structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy.</p>		
<p><b>5. Life-cycle Assessment</b> The process of evaluating the effects a product has on the environment over its entire life cycle.</p>		



## For further information

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### Training material

To meet training needs, various types and sources of assistance have been developed:

#### ***Profiting from Cleaner Production: Short Presentations for Senior Executives***

Awareness-raising modules for senior executives, in the form of 45- to 60-minute briefings

1. ***Companies*** CP EXEC 1 – for business leaders
2. ***Financial Institutions*** CP EXEC 2 – for bank executives
3. ***Government*** CP EXEC 3 – for government officials

ISBN 92-807-2200-X

#### ***Profiting from Cleaner Production: Resource Kit for Training***

Training modules designed for different audiences and events (on CD ROM)

1. ***Introduction to Cleaner Production Concepts and Practice*** CP 1 – 1 day introductory programme
2. ***Introduction to Capital Budgeting and Funding of Projects*** CP 2 – 1 day introductory programme
3. ***Profiting from Cleaner Production*** CP 3 – 2 day skill development programme
4. ***The Cleaner Production Investment Process*** CP 4 – 2 day skill development programme

A Trainer's Guide accompanies the programmes. ISBN 92-807-2201-8

#### ***Profiting from Cleaner Production : Towards Efficient Resource Management***

8-page illustrated booklet. ISBN 92-807-2199-2

### Websites

UNEP/DTIE Cleaner Production:

[www.unep.org/pc/cp](http://www.unep.org/pc/cp)

UNEP/DTIE Cleaner Production Financing:

[www.financingcp.org](http://www.financingcp.org)

United Nations Industrial Development Organization:

[www.unido.org](http://www.unido.org)

Sustainable Alternatives Network (SANet):

[www.SustainableAlternatives.net](http://www.SustainableAlternatives.net)

### Cleaner Production-related publications

***Cleaner Production: A Guide to Sources of Information*** The fourth edition of a popular resource showing where and how to find organizations, publications, electronic resources, training courses, etc., on Cleaner Production.

ISBN 92-807-1696-4

***Financing Cleaner Production: A Study on Past Investment Practices*** The results of the first phase of a UNEP project on strategies and mechanisms for promoting Cleaner Production investments in developing countries.

ISBN 92-807-1951-3

***International Declaration on Cleaner Production*** The implementation guidelines for signatories include more than 300 activity suggestions to assist in implementation of the six principles in the declaration. Three volumes.

Companies: ISBN 92-807-2094-5; Government: ISBN 92-807-2093-7; Facilitating Organizations: ISBN 92-807-9095-3

All publications can be ordered online at [www.earthprint.com](http://www.earthprint.com)





This set of checklists for use by Cleaner Production practitioners and promoters is intended as a decision support tool. The objective is to promote the integration of preventive strategies and efficient resource management into investment decision-making processes. The checklists in this guide are designed for:

- **Implementers** – Enterprises considering or using Cleaner Production approaches
- **Investors** – Banks and other financial institutions that may consider funding Cleaner Production projects
- **Facilitators** – Promoters and supporters of Cleaner Production: Government, NGOs, consultants and media representatives

A variety of information and advice is available from the United Nations Environment Programme at:

UNITED NATIONS ENVIRONMENT PROGRAMME  
DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

39-43 quai André Citroën  
F-75739 Paris Cedex 15, France  
Tel: +33 1 44 37 14 50 Fax: +33 1 44 37 14 74  
E-mail: [unep.tie@unep.fr](mailto:unep.tie@unep.fr)  
Internet: [www.uneptie.org](http://www.uneptie.org)

[www.unep.org](http://www.unep.org)

United Nations Environment Programme  
P.O. Box 30552 Nairobi, Kenya  
Tel: (254 2) 621234  
Fax: (254 2) 623927  
E-mail: [cpinfo@unep.org](mailto:cpinfo@unep.org)  
web: [www.unep.org](http://www.unep.org)

