

Independent UNIDO Country Evaluation

The Republic of Indonesia



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO OFFICE FOR INDEPENDENT EVALUATION

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The Republic of Indonesia**



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Abbreviations and acronyms

APEC	East Asia Summit, Asia-Pacific Economic Cooperation
ASEAN	Association of South East Asian Nations
BAPPENAS	National Planning Agency
BAT	Best Available Technology
BEP	Best Environmental Practices
BPPT	Badan Pengkajian dan Penerapan Teknologi (Agency for the Assessment and Application of Technology)
BRR	Agency for Rehabilitation and Reconstruction for Aceh and Nias
BSN	Badan Standardisasi Nasional (National Standardization Agency)
COP	Conference of Parties
CP	Country Programme
CRECPI	Centre for Resource Efficient and Cleaner Production Indonesia
CSF	Country Service Framework
CSF	Common Service Facilities
CTA	Chief Technical Advisor
DPR	People's Representative Council
EMS	Environmental Management System
EnMS	Energy Management System (ISO)
FHH	Female Headed household
FO	Field Office
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHG	Green House Gas
GNI	Gross National Income
GOI	Government of Indonesia
G2	Group of Twenty
HCFC	Hydrochloro Fluoro Carbons
HQ	Headquarter
ICPC	Indonesia Cleaner Production Centre
IDP	Internally Displaced Person
IGDC	Indonesian Green Development Centre
ILO	International Labour Organization
ISID	Inclusive and Sustainable Industrial Development
INCPN	Indonesian National Cleaner Production Network
LED	Local Economic Development
MHP	Micro Hydro Power
MOA	Ministry of Agriculture
MMAF	Ministry of Marine Affairs and Fisheries

MIKTA	Group of Mexico, Indonesia, South Korea, Turkey and Australia
MoCT	Indonesian Ministry for Culture and Tourism
MOE	Ministry of Environment
MOF	Ministry of Finance
MOFI	Ministry of Finance and Investment
MOI	Ministry of Industry
MOMT	Ministry of Manpower and Transmigration
MOT	Ministry of Trade
MPG	Maluku Provincial Government
NAM	Non-Aligned Movement
NIP	National Implementation Plan
ODA	Official Development Assistance
ODS	Ozone Depleting Substances
OECD	Organization for Economic Cooperation and Development
OIC	Organization of Islamic Cooperation
OJK	Otoritas Jasa Keuangan (Financial Services Authority)
PA	Preparatory Assistance
PCB	Polychlorinated biphenyls
PDIP	Regional Representative Council
PMC	Project Management Committee
POPs	Persistent Organic Pollutants
PPG	Project Preparation Grant
PSU	Programme Support Unit
RECP	Resource Efficiency and Cleaner Production
RPJMN	Indonesia's Medium Term National Development Plan
RRC	RECP Co-ordinating Committee
SCP	Sustainable Consumption and Production
SECO	State Secretariat for Economic Affairs (Swiss)
SKKNI	Indonesia National Competency Standards
SMEs	Small and Medium Enterprises
STP	Jakarta University of Fisheries
TC	Technical Cooperation
TCB	Trade Capacity Building
UN	United Nations
UNCT	United Nations Country Team
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNDESA	United Nations Department of Economic and Social Affairs
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCC	United Nations Framework for Climate Change

UNFPA	United Nations Population Fund
UNIDO	United Nations Industrial Development Organization
UNMLF	United Nations Multilateral Funds
UNOCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNPDF	United Nations Partnership for Development Framework
U-POPs	Unintended Persistent Organic pollutants
UR	UNIDO Representative
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
VPG	Village Productivity Group
WB	World Bank
WEF	World Economic Forum
WFP	World Food Programme
WHO	World Health Organization
YEI	Indonesia Energy Foundation

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results based management) principles.
Outcome	The likely or achieved (short-term and/or medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Country map



Executive summary

Introduction and background

The country evaluation was one of three country evaluations planned for 2015 and reviewed the entirety of UNIDO's presence taking 2009 as a starting point. It was a forward-looking and participatory exercise with an intention to feed into the development of the next Country Programme. The evaluation was conducted by Ms. Margareta de Goys, Director of the UNIDO Office for Independent Evaluation¹, Mr. Segbedzi Norgbey and Mr. Andreas Tarnutzer, international evaluation consultants, and Ms. Farsidah Lubis, national evaluation consultant. Field work in Indonesia was carried out in February/March 2015.

UNIDO has a long history of cooperation with Indonesia. The framework for UNIDO's present cooperation with Indonesia is the Indonesia Country Programme 2009-2013. The Country Programme (CP) which had a budget of USD 27 million was approved in May 2009 and has been fully funded. The largest portfolio is energy and environment with projects in this area amounting to USD 18 million. The bilateral donors were the Governments of Switzerland, Japan, Italy, New Zealand, Austria and the Republic of Korea totalling USD 12 million; and a large share of on-going and planned interventions is financed by the GEF. Two areas of the CP did not materialise; establishing a South-South Centre and the joint UN project on Human Development in Belu district.

Methodology and scope

The methodology encompassed desk review, interviews with UNIDO project managers, present and former staff of the UNIDO Field Office in Indonesia and Indonesian stakeholders, ranging from Government officials to beneficiaries. Past project evaluations fed into the country evaluation. The evaluation criteria of relevance, efficiency, effectiveness, sustainability and impact were used.

Key findings

There is a good level of cooperation with most public and private actors. UNIDO is a member of the United Nations Country Team but its role within the larger UN system could be further strengthened. The Field Office contributes to project management but could do more effective monitoring, reporting and follow-up on ongoing and past projects. Communication among Field Office and HQ could also be strengthened.

¹ Retired as of 30 April 2015

The Country Programme was well drafted with a comprehensive situation analysis. At the same time consultation and involvement of national stakeholders seem to have been limited. The results-orientation could have been stronger, both at the identification and reporting stages. A CP steering committee was foreseen but not put in place and country level monitoring and reporting have been weak. Field office reporting through bi-annual progress reports in coordination with stakeholders were maintained until 2010 and thereafter discontinued till the new ToR was drawn up in June 2014. Thereafter, the field office annual reports were reinstated. Recently the Ministry of Industry (MOI) has established a coordination committee. The overall reporting on CP implementation has been weak.

The relevance of the CP is high and there is strong national ownership for many projects. The CP was found to be aligned to national strategies, policies and needs and priorities. However, the Government contributions in financial terms have been at a low level. The high level of funding for the CP is an indication that the Country Programme as developed was relevant to national development priorities and also matched the priorities of the donor partners. Efficiency issues, in the form of severe delays in the start-up of implementation, were noticed for many of the projects, for instance the fisheries, RECP, Marine Current and HCFC 3 projects. On the other hand, there has been good use for national expertise, promoting cost-effectiveness. Many projects had located their Project Management Units with the national counterparts and this was found to be a good practice to foster sustainability and capacity development. Some projects incorporated private sector collaboration which was a good development.

Sustainable livelihood – Maluku

The sustainable livelihood project “Realizing minimum living standards for disadvantaged communities through peace building and village based economic development” (TF/INS/08/004 and US/INS/10/002) was implemented in Maluku following a period of civil unrest. The project – locally known as Maluku Pelagandong project – was financed by Japan, through the UN Trust Fund on Human Security and also received a small contribution from the New Zealand Fund; its total budget was approximately USD 2.15 million.

The project received an independent terminal evaluation in 2012. Consequently, the country evaluation mission mainly looked at design, sustainability and impact issues.

The objective of the project was to contribute to the revival of the livelihoods of the affected and most vulnerable population groups, including subsistence farmers, internally displaced persons (IDPs), returnees and female headed households (FHHs). The approach was to foster poverty reduction and increased

stability through the promotion of agro-based production and small business development.

The evaluation found the project to have been too ambitious, considering the budget, duration and local context. There had been a good level of local partners during implementation but limited attention to capacity building, dissemination of best practices or upscaling. The project strategy of providing training and basic equipment for free is controversial but was probably justified at the time the project was initiated and given the very rural based target beneficiaries to whom no other opportunities were available and the prevailing conditions after social strife.

Trade capacity building (TCB)

The TCB/fisheries project (XP/INS/08/002, SAP 120110) "Increasing trade capacity of selected value chains within the fisheries sector in Indonesia" – also named SMART-Fish Indonesia – is financed by the Swiss State Secretariat for Economic Affairs (SECO) with a budget of USD 4.5 million. It started with an inception phase in February 2012; the actual implementation phase will last until May 2018.

The project focuses on three priority value chains, namely (i) pole and line tuna, (ii) pangasius, and (iii) seaweed, and has been designed around six major technical components. It will start pilot activities for the three value chains in five selected provinces of the country. The main institutional partners are the Valcapfish Centre at the Jakarta University of Fisheries, and the Ministry of Marine Affairs and Fisheries (MMAF), as well as the local government organisations in the pilot provinces.

The holistic approach adopted for the sector and the institutional arrangements made for implementation are based on good logic, pertinent and incorporate various aspects of inclusive and sustainable industrial development. The choice of sector was relevant considering its size and potential for trade and employment generation. The potential development impact is high.

The project document is analytical and of high quality and was the result of a preparatory assistance project. The project has experienced some initial delays in implementation. The inception report was finalised in October 2014. Implementation at the central level has since started and the pilot activities in five selected provinces are being set up at present.

An important pending issue is the clarification of the legal status of the Valcapfish Centre and its ability to work independently and in particular to generate its own income from service supply. Should this not be possible, UNIDO

and the donor have agreed that an exit strategy will be developed to avoid unsustainable spending of programme resources within this component.

The low export capacity of the pangasius sector may become a sustainability risk for the programme. The business case for supporting the pangasius value chain will be validated to decide if the programme should continue to support this value chain.

Environment and energy

All the projects in this portfolio are relevant to UNIDO's mandate to promote and accelerate inclusive and sustainable industrial development, with particular reference to environmentally sound industrial production with the aim of meeting the challenges of climate change and reducing environmental degradation.

Many of the projects, particularly those within the environment portfolio, were designed to help Indonesia meet its obligations under international treaties such as the Stockholm Convention, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemical and thus, will contribute to global efforts to control toxic chemicals in general and to eliminate PCBs in particular. The projects also contribute to the elimination of ozone depleting substances under the Montreal Protocol.

These environment and renewable/energy efficiency projects are consistent with the relevant GEF focal area strategies in which UNIDO maintains strong comparative advantage in providing technical assistance. UNIDO projects create fundamental capacities within governments and among project beneficiaries; they enhance the regulatory and legislative infrastructure and strengthen institutions at national and local levels.

The exception to positive strategic relevance of the projects in this portfolio is the Nias hydropower project in which relevance was deemed mixed. On the positive side, the objective of the project to provide electricity to the community from a small hydropower plant would meet the needs of the community, is well supported by the local authorities and falls within the competence of UNIDO and could have supported productive uses. However, the evaluation could not discern clearly what the ICT centres would contribute to sustainable livelihoods especially when no specific needs nor target groups had been identified. The project design was weak in this respect as there was no strategic links between the SHP power generation and the Community Development Centres. However, the project was successful in providing energy access to the remote rural village community. The village was adversely affected during the Tsunami and earthquake in 2005. This

energy access to the rural village community provided a good source and opportunity for the community to engage in economic activities. UNIDO was presented with an award for this achievement by the President of Indonesia.

In general, the bulk of the projects in this portfolio experienced delays in project implementation. The delays have been the result of several factors, key among which are the long processes for project approval and registration in the relevant government ministries, delays in the transfer of fund resources from donors, poor communication between UNIDO and government ministries and, in one case, UNIDO's inability to recruit a competent Chief Technical Advisor in spite of several attempts to do so. Other reasons include lack of technical competence and understanding of particularly difficult sampling protocols, reluctance by some companies to release information and the inability, in a specific case, to secure international suppliers for the technology and equipment required for project implementation to proceed.

In one project, UNIDO had anticipated the delay in project registration in the government Ministry and was proactive in initiating the bidding processes and documentation for the procurement of project equipment, which, to some extent, ameliorated the effects of the delay.

The verdict on the effectiveness of project implementation is mixed. The majority of the projects in the portfolio have implemented their activities and in some cases exceeded their performance expectations based on what had been planned in the project documents. Useable project outputs have been produced. In projects such as the "National Network for Implementation of Resource Efficient and Cleaner Production in Indonesia" and the "Environmentally Sound Management and Disposal of PCB Waste and PCB Contaminated Equipment in Indonesia" however, as a result of delays, not much has been produced in the way of outputs relative to what should have been expected at this stage of project implementation. In general substantial work has been done in the areas of capacity building and technology support, regulatory and policy reform, institutional reform, regional cooperation and collaboration with universities and academic institutions to prepare guidelines and curricula. At the regional level, energy outlooks and guidance documents have been drafted and training materials on the environmentally sound management of chemicals from industrial processes e.g. boilers have been prepared.

The projects have produced many outputs that provide a measure of sustainability. For example, the development of policy frameworks, the drafting and promulgation of laws, standards and guidelines as well as experiences shared will go a long way to ensure some measure of sustainability of regional forum activities in the participating countries. Sustainability is also assured through the involvement of PCB equipment owners and private companies providing services for the collection, transport, interim storage and final disposal under the control of responsible governmental institutions within the framework of

the relevant legislation. Current updated government regulations on ozone depleting substances would assure the phase-out of HCFC 141b in the next years. The project provides a clear example that effective public-private partnerships have the potential to help phase out ozone depleting substances.

UNIDO has successfully contributed in removing Ozone depleting substances in the industrial foam sector with good developmental impact. In this regard, UNIDO received certificate of good implementation from the Ministry of Environment.

In the energy efficiency project, an accreditation scheme for ISO 50001 was issued in 2014 and the Indonesia Energy Foundation (YEI) has been established as Energy Management System, Systems Optimization and Energy Efficiency expert pool and service centre. Discussions have been held with government partners to help institutionalize and promote the adoption of ISO 50001 through a reward scheme for industries. The project further continues to work to promote more pilot industries to have ISO 50001 certification and empowering the established Foundation (YEI) to provide excellent services to industries and other clients. These schemes provide means of sustainability upon completion of the project. To further sustain the gains of the project there is need to integrate energy efficiency practices as minimum competency standard for significant energy users (boiler, compressor, pump, power plant, etc.) and operators in the industries.

Overall, the projects undertaken in the energy and the environment sector are relevant, a good deal of interlinkages have been established with national institutions; the industry and the private sector. This arrangement should contribute on the long-term sustainability of the project interventions. What would be required now is to establish the right monitoring and follow-up mechanisms through an appropriate project implementation steering committee mechanism involving all parties to ensure that there are no implementation delays leading to adverse chain effect in producing the desired results within the resources available.

Key conclusions

UNIDO's Indonesia Country Programme is relevant and in line with national needs and priorities. The level of funding of the Programme is high and the Programme has been able to develop into a commendable size. Still, there is a potential to do more and especially in areas of energy efficiency, green industry and development of agro-industrial value chains.

The 2012 independent final evaluation found the Maluku livelihood project to have been too ambitious, considering the budget, duration and local context. There had been a good level of local partners during implementation but limited

attention to capacity building, dissemination of best practices or upscaling. The project had been designed at a too small scale and dispersed in too many different production/value addition activities of which only few were economically viable and produced results in terms of local economic development.

The SMART-Fish programme is now well underway; initial delays could be addressed. A core challenge is its complexity, as it has many partner organisations both a central level as well as in the pilot provinces.

Core issues identified and being addressed at the moment are (i) the legal status of the Valcapfish Centre at the Jakarta University of Fisheries, as well as (ii) concerns about the international competitiveness of the Indonesian pangasius sector.

Key recommendations

There should be deeper integration and collaboration with counterpart ministries, for instance through seeking alignment with Government plans, strategies and budgets. The expected roles, benefits and contributions of counterpart agencies need to come out clearly and be defined in project documents.

Mainstream gender and give attention to gender already during design and inception phases.

A new Country Programme should be developed based on national needs and priorities but also reflecting the Inclusive and Sustainable Industrial Development (ISID) mandate of UNIDO and the forthcoming Sustainable Development Goals (SDGs). The new country programme should duly take into consideration the lessons learned and experience gained from the present country programme. The new country programme should also align its proposed outcomes with the UNPDF for Indonesia.

Given the size and scope of the country's industrial/manufacturing sector and being the largest economy and market in the region, potential exists for enhanced UNIDO technical cooperation. The formulation of the next country programme should take these issues into consideration, and also link them to present activities to solidify the envisaged results in due consideration of sustainability issues.

Recommendations on poverty reduction through productive activities

Any similar project should pay more attention during the design phase to apply a full-fledged logical framework approach, including stakeholder and problem analysis, and realistic project objective identification together with relevant and measurable performance indicators. A critical factor would be the proper

understanding of the risk factors which vulnerable target groups can be faced with as they have very limited opportunities and absorption capacities. Accordingly, a well formulated exit strategy developed.

Recommendations on Trade and Capacity Building portfolio

The SMART-Fish programme should continue its endeavour to solve the legal status of the Valcapfish Centre at the Jakarta University of Fisheries. If this cannot be achieved in reasonable time, an exit strategy must be developed to avoid unsustainable spending of programme resources within this component.

The export capacity and potential of the Indonesian pangasius sector must be validated to decide if the programme will continue to support this value chain.

Recommendations on the environment and energy portfolio

This evaluation believes that expeditious action from UNIDO to appoint a Chief Technical Advisor for the project on "National Network for Implementation of Resource Efficient and Cleaner Production in Indonesia" will help put the project back on course and assuage the fears and frustration of the key stakeholders. In the meantime, activities that could be implemented by CRECPI in the absence of the CTA should be funded to allow the centre to continue to be functional and develop the momentum for when the CTA assumes his/her responsibilities.

MOE should expedite its internal processes for the submission of the NIP to the COP in order to benefit further from additional potential resources for the implementation of POPs projects.

This evaluation believes that lack of adequate communication between UNIDO and the project stakeholders accounted for the misunderstandings with MOE and the subsequent loss of the opportunity to work on the next phase of this project. There seems to be a need for improved communication between UNIDO and government partners at the field level and delegated authority to UNIDO Representative to make the processes of project implementation more efficient.

Networks created as result of these projects need to be maintained and reinforced. Information exchange with other companies (national and international) is very important for creating awareness and improved process efficiency.

1. Introduction and background

1.1 Introduction

This report presents the findings of the evaluation of UNIDO's interventions in the Republic of Indonesia implemented since 2009 with major focus on the Country Programme (CP) 2009 – 2013. The independent evaluation was one of the three Country evaluations planned to be carried out in 2014 and is included in the Work Programme for 2015, approved by the Executive Board.

UNIDO has been involved in Indonesia since 1969. The overall objective of the Country Programme 2009–2013 was to support the socio-economic transformation in Indonesia using manufacturing as dynamic force and to contribute to achieving the Millennium Development Goals (MDGs). The CP was developed based on national and donor priorities and the country's long term development plan, which spans from 2005 to 2025. The CP is segmented into 5-year medium-term plans, each with different development priorities.

The country programme was also in line with Indonesia's United Nations Programme Development Framework (UNPDF) 2011-2015 in terms of UNIDO's contribution as per its mandate for the programme areas covered in the UNPDF namely: trade capacity building, agribusiness development, climate change issues-on energy and environment. The CP which had a planned duration of 2009-2013; during this period most of the projects identified were formulated and resources mobilized as planned within the timeframe of the country programme. The exception has been the creation of the South-South centre and the joint UN programme in Belu. These two projects did not materialise mostly in view that the south-south centre called for substantive government contribution in terms of financial resources and for the Belu project, funds mobilization through UN trust fund mechanism was not forthcoming.

The country programme duration in 2013 was further extended until 2015 to enable full implementation of the CP in view of various delays in the start-ups of a number of projects.

The independent evaluation was carried out between February and April 2015. The evaluation team undertook a field mission to Indonesia from 23 February to 3 March 2015. The evaluation team was composed of Ms. Margareta de Goys, Director of the UNIDO Office for Independent Evaluation, Mr. Segbedzi Norgbey and Mr. Andreas Tarnutzer, International Evaluation Consultants and Ms. Farsidah Lubis, National Evaluation Consultant. In addition to assessing the CP the evaluation included an assessment of the function of the Field Office (FO).

The Evaluation was carried out as a forward looking exercise with the main purpose to feed into the next Country Programme which is already being drafted. The members of the team were not involved in the design or implementation of the programme, components or any of the underlying projects.

The country evaluation assessed the efficiency, effectiveness, impact and sustainability of the UNIDO programme interventions in Indonesia implemented since 2009. This included re-examination of the relevance of the objectives and the appropriateness of the design, specifically in regards to inclusive and sustainable industrial development (ISID).

The CP had an overall budget of USD 27 million and was 104% funded. It was designed based on the recommendations, conclusions and lessons learned highlighted in the evaluation of the second phase of the previous Country Service Framework (SCF II) and carried over projects from it. It included Trade Capacity Building, Poverty Reduction and sustainable livelihoods, Energy and Environment components. The largest share of ongoing planned interventions was financed by the Global Environment Facility (GEF). Other important donors were: the State Secretariat for Economic Affairs (SECO), Switzerland Government, the Multilateral Fund for the implementation of the Montreal Protocol, and the Governments of Japan, Italy and New Zealand.

From the projects designed, two projects South/South cooperation and Human development in Belu district didn't acquire adequate funding. This was mostly due to high degree of financial resources required for establishing the South-South centre from government. With regard to Human development project in Belu, which did not materialise, again the planned financial measures were expected to be forthcoming from UN Trust Fund Mechanism-which being a joint UN project involving various UN agencies also was not able to mobilise the required resources. Both these two projects were beyond UNIDO's own independent efforts in resources mobilisation and were more dependent on other development partners.

1.2 Evaluation purpose, scope and methodology

Evaluation purpose

The evaluation entails an independent assessment of UNIDO's interventions in Indonesia, with 2009 as a starting point. It was undertaken following the completion of the Country Programme and findings and recommendations from the evaluation will be incorporated into the planning process for the next Country Programme. The Country Evaluation was designed as a forward-looking exercise

seeking to identify best practices and areas for improvement in order to draw lessons to enhance the UNIDO presence and programme in Indonesia.

The purpose of the country evaluation was to assess in a systematic and objective manner the relevance, efficiency, effectiveness (achievement of outputs and outcomes), impact and sustainability of the programme and its individual components. The evaluation also assessed the achievements of the interventions against their key objectives, including re-examination of the relevance of the objectives and the appropriateness of the design. The evaluation specifically reviewed the extent to which the CP and individual projects mainstreamed gender equality and empowerment of women and youth and other cross-cutting issues. In addition, the evaluation has attempted to identify factors that have facilitated or impeded the achievement of the objectives and to make recommendations based on these findings.

In particular the following features were covered by the evaluation:

- To assess the relevance of UNIDO's interventions in relation to national needs and national and international development priorities;
- To assess the progress of Technical Cooperation (TC) interventions towards the expected outcomes outlined in the country programme (CP) and related project documents;
- To assess the efficiency of UNIDO Technical Cooperation projects under the CP;
- To assess contributions to the achievement of national development and UNDAF objectives;
- To assess synergies within and between UNIDO projects as well as with related assistance of other donors/agencies;
- To assess the adequacy of coordination and management systems and steering mechanisms;
- To generate findings and draw lessons that can feed into future UNIDO projects and programmes in Indonesia and possibly elsewhere;
- To serve as an input to the Thematic Evaluations to be conducted in 2015:
 - UNIDO interventions in the area of enterprise/job-creation and skills development, including for women and youth;
 - UNIDO procurement process.

Evaluation scope

As of the Terms of Reference (ToR, included as Annex A) the evaluation covered the full range of UNIDO's activities in Indonesia, including UNIDO representation, and technical cooperation projects and programmes. It tried to assess why projects/programmes have succeeded or failed and to identify best practices and

lessons learned. The evaluation reviewed all major projects within the ongoing Country Programme, as well as other (non-CP) UNIDO projects implemented in Indonesia since 2009, coordination and management arrangements and functions.

In this respect, the evaluation reviewed the performance and impact of selected individual projects and, in a wider sense, the contribution of UNIDO to the development goals of Indonesia. The focus was given on projects of a certain size or considered strategically important.

Based on the structure of the Country Programme the projects under this CP covered the following thematic areas:

- Trade Capacity Building
- Poverty reduction through productive activities
- Energy
- Environment
- Montreal Protocol

Programmes or projects that had been subject to prior evaluations were used as inputs into the current evaluation. The following project evaluations were used:

1. TF/INS/08/004 and US/INS/10/002: UNIDO Independent Evaluation - Realizing minimum living standards for disadvantaged communities through peace building and village based economic development, 2012.
2. UE/RAS/05/004: UNIDO Independent Terminal Evaluation - Promotion and Transfer of Marine Current Exploitation Technology in China and South East Asia (Pilot Plants), 2014.
3. GF/RAS/10/006: UNIDO Independent Terminal Evaluation - Regional Plan for the Introduction of BAT/BEP Strategies to Industrial Source Categories of Stockholm Convention Annex C of Article 5 in ESEA Region 2014.

Also relevant thematic evaluations and reviews were considered and reference is made to these evaluations/reviews under the assessment of the specific project. The country evaluation took the following UNIDO thematic evaluations covering Indonesia or which addressed issues relevant to the country into consideration:

1. Independent Thematic Evaluation of UNIDO's Post-Crisis Interventions. Period covered 2004- 2012 (2014).
2. UNIDO Independent evaluation - INDONESIA. Country Services Framework Phase II, 2005-2007 (2009).

In particular, the country evaluation reviewed to what extent recommendations have been implemented.

Assessments of individual projects are synthesized in Chapter 2: Technical Cooperation - Evaluation findings.

Evaluation methodology

The evaluation was participatory and involved stakeholders, including national counterparts (government as well as private sector), donors and beneficiaries as well as UNIDO and project staff. It was conducted in line with the ToR for the evaluation and due attention was given to the evaluation issues and questions developed in the ToR.

In terms of data collection the evaluation team used a variety of methods ranging from desk review (project and programme documents, progress reports, mission reports, Agresso/SAP search, evaluation reports, etc.) to individual interviews, focused group discussions, statistical analysis, a survey (Cleaner Production programme) and direct observation at project sites. To the extent possible information was validated through secondary filtering and cross checks by a triangulation of sources, methods and data.

Assessment of projects included an assessment of project design and intervention logic, a validation of available progress information through field visits, interviews with key stakeholders and beneficiaries, a context analysis of the project to validate implicit and explicit project assumptions and risks and interviews with government agencies and donors regarding the developments and tendencies in the project-specific environment.

The following projects were assessed individually:

Environment

1. US/INS/12/002: National Resource Efficient and Cleaner Production Programme in Indonesia.
2. GF/INS/12/001: Introduction of an Environmentally Sound Management and Disposal System for PCBs Wastes and PCB contaminated equipment in Indonesia - Preparatory Assistance.
3. GF/INS/12/003: Enabling activity to review and update the National Implementation Plan in Indonesia.

Montreal Protocol

1. MP/INS/11/003: HCFC Phase-out management plan (STAGE I, PHASE I) (Umbrella Project to phase out HCFC-141B from the manufacturing of Rigid Polyurethane foam at Isotech Jaya Makmur, Airtekindo, Sinar Lentera Kencana and Mayer Jaya.

Energy

1. GF/INS/11/001, XP/INS/11/002: Promoting energy efficiency in the industries through system optimization and energy management standards in Indonesia” and UNIDO Contribution for implementation phase of “Promoting Energy Efficiency in the Industries through System Optimization and Energy Management Standards.
2. TE/RAS/12/005, UE/RAS/05/004: Promotion and transfer of marine current exploitation technology in China and South East Asia (pilot plants)
3. UE/INS/09/003: Promoting energy efficiency in the industries through system optimization and energy management standards, Government of Italy contribution for project preparation.

Poverty reduction through productive activities

1. TF/INS/08/004, TF/INS/08/A04 and US/INS/10/002: Realizing minimum living standards for disadvantaged communities through peace building and village based economic development.

Trade Capacity Building

1. XP/INS/08/002, SAP 120110: Increasing trade capacity of selected value chains within the fisheries sector in Indonesia, financed by SECO.

The Country evaluation took place between December and March 2015. Initial interviews were conducted with the UNIDO Representative and UNIDO project managers prior to the evaluation mission. A ten days field mission was conducted in March 2015. The evaluation team started the field work together and had a number of joint meetings. Thereafter the team divided the work according to sectors and projects to be covered. Interviews were semi-structures and qualitative allowing for follow-up questions and inputs from the interviewees.

Presentation of preliminary findings took place in Indonesia and at UNIDO Headquarters. The list of persons consulted is attached as Annex A while Annex C provides a list of documents consulted. The draft report was shared with internal and external stakeholders for comments and factual validation.

The overall times schedule is presented in the table below:

Activity	Estimated month
Collection of documentation by ODG/EVA	December, January, February 2015
Desk review by members of evaluation team	February 2015
Interviews at HQ and development of inception report	February 2015
Field work in Indonesia (2 weeks)	February - March 2015
Presentation of preliminary findings at HQ	March 2015
Drafting of report	March-April 2015
Collection and incorporation of comments into report	June-July 2015
Issuance of final report	August 2015

Limitations

Reporting in relation to the Country Programme was weak and monitoring data in relation to individual projects were not always available or up to date and when available varied greatly in quality and coverage. A CP steering committee was foreseen but not put in place.

1.3 Country context

Geography

Indonesia is the world's largest archipelagic state². It comprises about 18,000 islands³, of which some 6,000 are inhabited. The country is situated in Southeast Asia with a total land area of 1.9 million square km. Of this stretch, around 5 per cent is made up of water. Bordered by the Indian Ocean to the west and the Pacific Ocean to the east, the country is strategically situated astride and alongside of global sea-lanes and trade routes.

Government

Indonesia is a unitary state. It is a republic governed by a President and a Vice President who are elected by popular vote to head the country within five-year terms of offices. The President and Vice President govern with the support of an appointed Cabinet of Ministers. Indonesia's 692-member parliament is made up of a 560-member People's Representative Council (DPR) and a 132-member Regional Representative Council (DPD). The members of the DPR are elected by proportional representation and have the authority to make legislation, determine the budget and oversee the implementation of legislation by the Cabinet. Four

² <http://www.indonesia.go.id/in/sekilas-indonesia/geografi-indonesia>, 17 March 2015

³ <http://www.indonesia.go.id/in/sekilas-indonesia/geografi-indonesia>, 17 March 2015

representatives from each of Indonesia's provinces make up the DPD, which has the authority to deal with bills affecting regional governance, local government and the management of natural and other economic resources.

Indonesia held its last national parliamentary elections on 9 April 2014 and a new Government was formed in October 2014. The Partai Demokrasi Indonesia Perjuangan (PDIP) party won 109 seats of the DPR's 560 seats, securing the largest share of number of seats won among the parties that contested the elections.

Indonesia is a founding and active member of the Association of Southeast Asian Nations (ASEAN). The country and Australia are the only two countries of the Southeast Asian region that are members of the Group of Twenty (G20) major economies. Indonesia is also a member of the East Asia Summit, Asia-Pacific Economic Cooperation (APEC), the Indian Ocean Rim Association (IORA) and Mexico, Indonesia, South Korea, Turkey and Australia (MIKTA). It is also a founding member of the Non-Aligned Movement (NAM), the Organization of Islamic Cooperation (OIC), and the Group of 77 developing countries.

Population

With a population of approximately 255 million⁴ people, Indonesia is the world's third largest democracy after India and the USA. While Indonesia is a secular state, it is also home to the world's largest Muslim population⁵. The country's average annual population growth rate is projected to be around 1.2 per cent⁶ between 2015 and 2020. Based on this growth projection, it is estimated that Indonesia's population will reach a total number of 271 million by the year 2020⁷. Indonesia is ethnically diverse, with over 300 ethnic groups and more than 700 local dialects spoken in practice. The country's official language is Bahasa Indonesia.

Indonesia stands to benefit from a demographic bonus offered by the country's population structure, which is defined by a decline in the dependency ratio of the country's non-working population towards its working population. Such a structure notionally increases a country's labour supply, raises its savings and enriches its human capital.

⁴ <http://www.bps.go.id/linkTabelStatis/view/id/1274>, 17 March 2015

⁵ <http://www.indonesia.go.id/in/sekilas-indonesia/geografi-indonesia>, 17 March 2015

⁶ http://www.bappenas.go.id/files/5413/9148/4109/Proyeksi_Penduduk_Indonesia_2010-2035.pdf, 17 March 2015

⁷ http://www.bappenas.go.id/files/5413/9148/4109/Proyeksi_Penduduk_Indonesia_2010-2035.pdf, 17 March 2015

The demographic bonus will benefit Indonesia's economy not only at the national level but at the international level as well. The country's productive age population constitutes around 38 percent of ASEAN's total productive age population. The large number and proportion of Indonesia's working age population not only enlarges its domestic labour force but also opens up opportunities for Indonesian workers to fill demands for workers coming from countries with diminishing work forces such as Singapore, Korea, Japan and Australia.

Poverty

Indonesia is a lower middle-income country with a GDP of USD868 billion (current USD) in 2013 and an estimated poverty headcount ratio at the national poverty line of 11percent in 2014⁸. The country has succeeded in reducing its national poverty ratio from 13.3 percent in 2010 to 11.4 percent in 2013⁹. This reduction, however, does not acknowledge the advances or recognize the limited progress made by individual provinces. The proportion of populations living below the national poverty line among Indonesia's 33 provinces range between 4 percent in the Capital City of Jakarta and 28 percent in the province of Papua. This illustrates the wide disparity in prevalence of poverty among the provinces where the highest proportion of 28 percent is 7 times over the lowest proportion of 4 percent.

Human Development Index

UNDP's 2014 Human Development Report computes Indonesia's 2013 Human Development Index at 0.684¹⁰, placing the country among the upper levels of its list of medium human development countries. Ranked at number 108 out of 187 countries, Indonesia's position is defined by its population's life expectancy at birth of 71 years, mean years of schooling of 7.5 years and expected years of schooling of about 13 years. The index also takes into consideration Indonesia's Gross National Income (GNI) per capita of 8,970 (2011 Purchasing Power Parity (PPP) USD)¹¹

Gender equality

The UNDP 2014 Human Development Report assigns a value of 0.5 to Indonesia's Gender Inequality Index, ranking the country at number 103 of the Report's list of countries. This value reflects a maternal mortality ratio of 220 deaths per 100,000 live births, an adolescent birth rate of 48.3 births per 1,000 women aged 15 to 19, a 19 percent share of seats held by women in parliament,

⁸ <http://data.worldbank.org/country/Indonesia>, 20 March 2015

⁹ <http://data.worldbank.org/country/Indonesia>, 20 March 2015

¹⁰ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>, 19 March 2015

¹¹ <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>, 19 March 2015

a 40 percent proportion of females with at least some secondary education and a 51 percent participation rate of women in the labour force.

Industry outlook

According to 2000-2014 data, the services sector constitutes 38% of total GDP. The industrial sector is the sector that currently contributes most to Indonesia's annual GDP growth. The two most important sub-sectors of industry are mining and manufacturing, both being major pillars of the nation's economy since the 1970s, thus being engines of economic change and development. Although manufacturing has lost its momentum after the Asian Crisis of the late 1990s, it still constitutes the most popular sub-sector of Indonesia in terms of foreign direct investment (FDI), followed by the mining sub-sector. Indonesia's main mining and manufacturing products are: coal, oil, gold, automobiles, electronics, footwear, textile products, paper products, furniture¹²

As described in the Country Programme 2015-2019 the industry sector in Indonesia has growth close to 7% during 2013. The sector of non-oil and gas has growth up to 6.5 %, which is high compared to the economic growth that was only 6.17% during January to September 2012. The highest industrial growth were in fertilizer, chemical and rubber goods manufacturers that reached 8.91%, while Cement and Entrenchment goods manufacturers reached a growth up to 8.7%. Total foreign investment within industrial sector was USD 8.59 trillion.

In 2008 the Ministry of Industry expects an increase of 44.5% over the previous year of the country's export total including the textile, oil and gas, palm oil and rubber sectors. An increase is expected in the earnings of the automotive sales while earnings from forestry products are expected to fall slightly. The electronics industry is growing and it is one of the top priorities of the Government. The availability of land to build factories, low labour costs and the availability of workers are major strengths. However, the industry is still in its infancy in Indonesia, technological advances are slow, domestic products are not popular and raw materials need to be imported.

Within services, the most important are: trade, hotel and restaurants (around 14% of GDP); transport and communication (7% of GDP); finance, real estate and business services (7% of GDP) and government services (6%). Agriculture accounts for the remaining 15%.¹³

¹² Indonesia investments <http://www.indonesia-investments.com/culture/economy/general-economic-outline/industry/item379> (Retrieved 01.12.2014)

¹³ Trading Economics: <http://www.tradingeconomics.com/indonesia/gdp-growth-annual> (Retrieved 28.10.2014)

As far as energy is concerned, Indonesia produces oil, coal, natural and has a high renewable energy potential (solar, wind, hydro and geothermal energy). According to the International Energy Agency (IEA) Indonesia was the 10th top natural gas producer in 2009. Indonesia is also blessed with huge renewable energy sources: Hydro, Geothermal, Mini/Micro-hydro and biomass. In addition solar energy and probably ocean/wave energy are available.

According to the Investment Coordinating Board, the industrial sector is growing at a faster rate than GDP. The electronics industry offers the most potential for significant growth in the coming years. For the foreseeable future the two sectors expected to lead progress are mining and agriculture. . However, a number of issues still need to be tackled, including government reforms. Although the mining laws are being amended, the process needs to be speed up and labour laws need to be addressed to move the economy ahead at a faster pace. While Indonesia is still seen as a major source of raw materials for the mining industry, the government needs to improve the investment climate before any of the larger international companies are likely to consider developing new projects in the country. Investment in this sector has been very low in recent years.

Despite the ongoing global economic slowdown, Indonesia is in a strong position to raise its industrial output to cater to both export and domestic markets. The available raw material base, large home market and growing region as a whole all bodes well for future demand. Strong macroeconomic fundamentals combined with the country's openness to foreign investors have helped shift production into higher gear, with rapid growth in capacity and production.

Millennium Development Goals (MDG) achievements¹⁴

Following are brief descriptions of the status of Indonesia's achievement of the country's MDG goals:

Goal 1: Eradicate Extreme Hunger and Poverty

Indonesia has succeeded in reducing the proportion of its population living under the national poverty line from 15 percent in 1990 to 12 percent in 2013. The country's growth in GDP per labour unit has also increased from 4 percent in 1990 to 5 percent in 2012. Additionally, the proportion of Indonesia's population afflicted by hunger has decreased between the years 1989 and 2013 as evidenced by the reduced prevalence of underweight under-five aged children from 31.0 percent to 19.6 percent.

Goal 2: Achieve Universal Education

Indonesia runs a nine-year basic education system. In 2012, the country's net

¹⁴ Source: BAPPENAS. MDG 2013 Achievement Report, Indonesia, 2014

enrolment rate for elementary level education reached 96 percent; the proportion of grade I students who reached grade VI reached 96.4 percent; and literacy rates for men and women of age 15-24 reached 99.1 percent.

Goal 3: Promote Gender Equality and Empower Women

Indonesia has achieved the majority of its 2015 MDG targets to achieve gender equality and empower women. In 2013 the net enrolment ratio between women and men at elementary level education was 99.8 percent, at junior secondary level 105.7 percent, at senior high school level 100.7 percent and at higher education level 109.7 percent. In 2013 women's participation in non-agriculture wage labour increased to 35 percent and the proportion of seats held by women in parliament increased to 17 percent.

Goal 4: Reduce Child Mortality

Mortality of under-five aged children has declined from 97 in 1991 to 40, per 1,000 live births in 2012. Infant mortality has declined from 68 to 32 per 1,000 live births; and neonatal from 32 to 19 per 1,000 births. The proportion of one-year old children who were immunized against measles increased from 45 percent in 1991 to 74 percent in 2013.

Goal 5: Improve Maternal Health

The proportion of births attended by trained health personnel has increased from 41 percent in 1992 to 83 percent in 2012. Maternal mortality, however, has only decreased from 390/100,000 live births in 1991 to 359/100,000 live births in 2012.

Goal 6: Combat Malaria HIV/AIDS and other Diseases

The prevalence of HIV and AIDS in Indonesia is still high at 0.4 percent in 2012. The incidence of malaria has declined sharply from 4.7 per 1,000 citizens in 1990 to 1.7 per 1,000 citizens in 2012.

Goal 7: Ensure Environmental Sustainability

The ratio of tree covered areas against Indonesia's total land area decreased from 60 percent in 1990 to 52 percent in 2012. The volume of CO₂ emissions increased from 247.522 Gg CO₂e in 2000 to 356.823 GgCO₂e in 2008. Moreover, the proportion of household with sustainable access to safe drinking water went up from 37.73 percent (1993) to 42.76 percent (2011), while those with proper sanitation increased from 24.81 percent (1993) to 55.60 percent (2011)¹⁵. Special attention needs to be given in working against this Goal. Priorities are expanding water and sanitation systems to serve growing urban populations; empowering rural communities to take responsibility for

¹⁵ Source: <http://www.id.undp.org/content/indonesia/en/home/mdgoverview/overview/mdg7/>

infrastructure management; and enhancement of role and responsibilities for local governments in natural resource management and water supply/sanitation.

Goal 8: Develop a Global Partnership for Development

Indonesia's finance and trade systems have become more open. The country's economic indicators point to an increase in the ratio of exports and imports in the country's GDP from 42 percent in 1990 to 44 percent in 2012. **Priority is** now given to strengthening collaboration with the international community and international finance institutions, investing more on information and communication technology to increase access to telephones and internet.

Economic overview

Indonesia is the world's 16th largest economy. Having grown at an average rate of 7 per cent per annum¹⁶ between 2010 and 2013, the country's economy is also regarded one of the world's fastest growing.

Indonesia's economy is also the largest in Southeast Asia. Its gross domestic product per capita steadily rose from USD2,272 in 2009 to USD3,475 in 2013¹⁷.

Indonesia's economic growth has been driven by the tertiary sector that grew by an average rate of 7.4 per cent over the past five years. This was followed by that of the secondary sector that grew at an average rate of 4.3 per cent per annum with the industrial sector growing at an average rate of 4.9 per cent per annum. In terms of expenditures, Indonesia's economic growth over these years was driven by investments and exports that grew by average rates of 6.9 per cent and 5.3 per cent per annum respectively.

The sector that currently contributes most to Indonesia's annual GDP growth is industry, and the two most important sub-sectors are mining and manufacturing. The country's main mining and manufacturing products are coal, oil, gold, automobiles, electronics, footwear, textile products, paper products and furniture¹⁸.

Indonesia's economic growth has fuelled the expansion of employment opportunities, which has in turn decreased open unemployment from 7.4 per cent in 2010 to 5.9 percent in 2014. The government claims that the combined contributions of economic growth, employment creation, and the advancement of

¹⁶ BAPPENAS. RPJMN 2015-2019, Book I National Development Agenda, Chapter 4 Macro Economic Framework, Table 4.1 State of Indonesia's Macro Economy, 2010-2014

¹⁷ <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>, 18 March 2015

¹⁸ Source: <http://www.indonesia-investments.com/culture/economy/general-economic-outline/industry/item379>, 9 April 2015

affirmative policies over the past five years have constituted the foundation of its success in reducing poverty in Indonesia.

Indonesia currently and in the foreseeable future hosts a large labour force. The country has a young population, half of which is below the age of 30 years, and entrants into the labour force number around two million each year. Between 2010 and 2014 Indonesia's labour force grew from 117 million up to 122 million.

Open unemployment, however, continues to be problematic. Employment data for 2012¹⁹ reveal that the total open unemployment rate for women and men was 6.14 percent. The open unemployment rate for women was 6.77 percent and open unemployment for men was 5.75 percent. Disaggregated by sex and age, open unemployment was 26.52 percent for women in the 15-19 age group and 15.48 percent for women in the 20-24 age groups. For men, open unemployment was 26.08 percent in the 15-19 age group and 15.08 percent in the 20-24 age group.

Other challenges to Indonesia's economic development include the fact that out of a population of 237 million, more than 28 million Indonesians are still living below the poverty line, that employment growth has been slower than population growth and that the quality as well as coverage of public services are still well below standards that would be expected of a middle income country. Other factors that have also been cited include possible impediments to investment such as regulatory uncertainties, shortcomings in infrastructure provision and adjustments in minimum wages.

Indonesia's Economic Growth Prospects for the years 2015-2019²⁰

The Government of Indonesia expects the country's economy to continue to register strong growth from 2016 onward reaching the rate of 7.1 per cent in the year 2017. It also expects that this rate of growth rate will continue to rise in 2018 and 2019 reaching rates of 7.5 per cent and 8.0 per cent respectively. This growth is expected to raise income per capita from Rp47.8 million (USD 3,918) in 2015 to Rp72.2 million (USD 6,018) in 2019.

The Government expects investments to reach around 10.4 percent in 2017 and 12.1 per cent in 2019. It presumes that the strong drive of investments will raise the contributions of exports of goods and services as well as that of consumption to GDP. The Government predicts that exports will grow by 8.8 per cent in 2017 and will reach 12.2 per cent in 2019. It also estimates that private and

¹⁹ Source: <http://www.bps.go.id/linkTabelStatistik/view/id/1607>, 10 April 2015

²⁰ Source: BAPPENAS. Indonesia's Medium Term National Development Plan, 2015-2019, (2014)

government consumption will grow in stages to reach 6.1 per cent and 2.5 percent respectively in 2019.

The Government also estimates that the processing industry will grow at an average rate of 7.4 per cent per annum over the next five years. This would be a rate higher than that of the expected national economic growth rate. Agriculture, forestry and fisheries based industries are projected to grow at average rates of 4.5 percent per annum. The tertiary industry is also expected to deliver high rates of growth with the information and communication industry projected to grow at the rate of 13.4 per cent in 2019.

It is expected that Indonesia's strong economic growth will reinforce the country's efforts to reduce its poverty rate from 9.5 – 10.5 percent in 2015 to reach approximately 7.0 - 8.0 per cent towards the end of 2019. The expected strength of the country's economic growth is also projected to lower the country's open unemployment rate from 5.5 -5.8 in 2015 to 4.0 to 5.0 per cent within the same time frame.

Indonesia's Medium Term National Development Plan (RPJMN) 2015-2019

The Government of Indonesia launched its 2015-2019 Medium Term National Development Plan (RPJMN) in January 2015. The plan is the third of four five-year medium term national development plans that make up Indonesia's Long Term 20-year National Development Plan for the years 2005 up to 2025.

The RPJMN describes its objective as that of: 'establishing development in a holistic manner in various fields by emphasizing the achievement of economic competitiveness on the basis of the supremacy of natural resources and human resources of quality as well as of continuously increasing capacity in knowledge and technology.'

It then proceeds to identify the following three challenges that the country faces in meeting its development goal:

1. to raise state authority, the country's development challenges include strengthening state stability and security, developing an administration to create an effective and efficient bureaucracy, as well as eradicating corruption;
2. to strengthen the national economy, the main development challenges are to achieve high and sustainable economic growth, accelerate equity and justice, and ensure sustainable development;
3. to address the nation's character crisis including intolerance, the main development challenges are to enhance the quality of the country's human

resources, reduce inter-regional disparities, and accelerate marine affairs development.

The 2015-2019 RPJMN's Development Priorities

Indonesia aims to become a high-income country by the year 2030. In order to reach this goal the RPJMN has established that the country's economy would need to grow by average rates of between 6 to 8 percent per annum²¹.

The RPJMN identifies the following challenges that the country will face in striving to achieve its economic growth targets during 2015-2019:

1. Limited availability of infrastructure;
2. Slow progress of the processing industry;
3. Overlaps and contradictions among national and regional laws and regulations;
4. Limited application and mastery of technology;
5. Limited capacity to finance development.

Indonesia's Development Outlook

Indonesia's new Government passed its first budget in February 2015. The shape of the budget was, to a large extent, influenced by the implementation of the government's new fuel pricing system, which dramatically reduced gasoline and diesel subsidy costs. It also reflects the Government's reform agenda of reallocating expenditures from fuel subsidies to key development priorities, particularly to infrastructure, as well as to agriculture and social programmes.

According to the World Bank, Indonesia's outlook will continue to be affected by key global economic trends²². The Bank predicts that global growth will continue to pick up moderately over coming quarters and that global trade growth will remain sluggish, suggesting that Indonesia will continue to be challenged in its efforts to lift the country's export performance, which has been faced by renewed real effective exchange rate appreciation, since mid-2014, and weaker commodity demand, notably from China.

Accelerating Indonesia's Maritime Development

Indonesia is aspiring to become 'a global maritime axis.' The Government of Indonesia believes that the country, as an archipelagic state, needs to accelerate marine development for the prosperity of its people

²¹ Source: 2014, BAPPENAS. Indonesia's Medium Term National Development Plan, 2015-2019, p.2-8

²² Source: 2015, The World Bank. Indonesia Quarterly, March 2015, Executive Summary

The 2015-2019 RPJMN's agenda for maritime development includes upholding of national maritime sovereignty and jurisdiction reinforced by the provisions of the United Nations Convention on the Law of the Sea which has been ratified by Indonesia. Other challenges include development of marine industries, fishing industries, maritime trade, and enhancing the utility of marine and sea floor potentials for the prosperity of the people of Indonesia. The need to safeguard the supporting capacity and sustainability of the environment also needs to be included in marine development.

With specific regard to the development of marine industries, the RPJMN includes, among its strategies, identification of the strengths of the marine economy, implementation of phased and coordinated development of marine industries through by establishing inter-industrial and inter-industrial sectors links with other economic sectors, particularly with those that supply industrial material.

Law number 3 of the year 2014 on Industrial Affairs

On 15 January 2014 the Government of Indonesia promulgated Law number 3 of the Year 2014 on Industrial Affairs to replace Law Number 5 of the Year 1984 on Industry which had, till then, constituted the legal framework of Indonesia's industrial development agenda. The principal aim of the new Law was to redefine Indonesia's industrial development environment, which had been affected by internal as well as external factors.

The new Law on Industrial Affairs recognizes and emphasizes the importance of environmental sustainability. It defines industry as all economic activities that process raw materials and/or utilize industrial resources to produce goods or services of added value or utility, and it further distinguishes industry into 'green industry' and 'strategic industry.'

Green industry, according to the law, prioritizes efficiency and effectiveness in the sustainable of use of resources to ensure harmonization between industrial development and the preservation of the environment as well as to provide benefits to the community.

Strategic industry, as defined by the law, includes industries that are significant to the state and control the life necessities of the people, increase or yield added value to strategic natural resources, or relate to the interests of state defence and security in the conduct of state government.

Law number 3 of the Year 2014 on Industrial Affairs lists seven objectives of industry, one of which is 'to create industry that is self-reliant, competitive, and progressive, as well as Industry Hijau (Green Industry)²³

The new law on industrial affairs also states that: 'Natural Resources shall be processed and utilized in an efficient, environmentally friendly and sustainable manner.²⁴ It further stipulates that industrial enterprises and industrial estates are required to prepare plans on the use of natural resources and that the plans are to refer to the National Industrial Policy.

The Law's Article 31 states that 'to enhance the added value of natural resources, the Government shall encourage the development of the domestic manufacturing industry, and Article 32 further affirms that the Government may prohibit or limit the export of natural resources.

With regard to use of energy, the Law stipulates that 'specific industrial enterprises and specific industrial estates that utilize natural resources as fuel are obliged to conduct energy management in accordance with prevailing rules, regulations and laws.²⁵ It also states that 'specific industries and industrial estates that utilize (air baku) are obliged to conduct water management in accordance with prevailing regulations and laws.²⁶

United Nations Partnership for Development Framework (UNPDF) 2011-2015

The United Nations Partnership for Development Framework UNPDF 2011 – 2015 was formulated over a period of two years in close coordination with the National Development Planning Agency (BAPPENAS) as the national Counterpart and with the engagement of several UN agencies, the Government, and civil society. The following 'actual' thematic focus areas for the UNPDF were identified:

1. Poverty and Vulnerability
2. Human and Social Impact of Crisis
3. Climate Change / Energy / Environment
4. HIV / Aids
5. Disaster Risk Reduction and Disaster Management
6. Participation and Decentralization

²³ Source: 2014, Ministry of Industry. Law number 3 of the Year 2014 on Industrial Affairs, Chapter I, Article 3, Item-c

²⁴ Source: 2014, Ministry of Industry. Law number 3 of the Year 2014 on Industrial Affairs, Section Three, Article 30, Item 1

²⁵ Source: 2014, Ministry of Industry. Law number 3 of the Year 2014 on Industrial Affairs, Article 34, Item 1

²⁶ Source: 2014, Ministry of Industry. Law number 3 of the Year 2014 on Industrial Affairs, Article 34, Item 2

The projects identified (and funded) under the Country Programme 2009 – 2013 had a direct link and were fully relevant to the identified thematic focus areas UNPAF 2011-2015.

1.4 UNIDO's interventions in Indonesia

UNIDO has implemented more than 303 projects in Indonesia since 1969 with a total budget of more than USD77 million²⁷. In the period 2003-2007 UNIDO's activities in Indonesia were organised under two consecutive Country Service Frameworks (CSF). UNIDO's Country Service Framework CSF I and CSF II covered the periods 2003 – 2004 and 2005 – 2007, respectively.

The 2009-2013 Country Programme (CP)

The Country Programme 2009 to 2013 was prepared with inputs received from Indonesia counterparts, in particular the Ministries of Industry, Trade, Environment, Energy and Mineral Resources. The formulation process took also into account the UNDAF 2006-2010, as well as the likely funding opportunities based on Indonesia's state of economic development. The CP had an initial budget of USD 26,997,631²⁸ (including support costs) and was structured along four components.

1. Poverty reduction through productive activities.
2. Trade capacity building.
3. Promotion of renewable energy and industrial energy efficiency.
4. Energy and environment, MP - Stockholm Conventions (POPs).

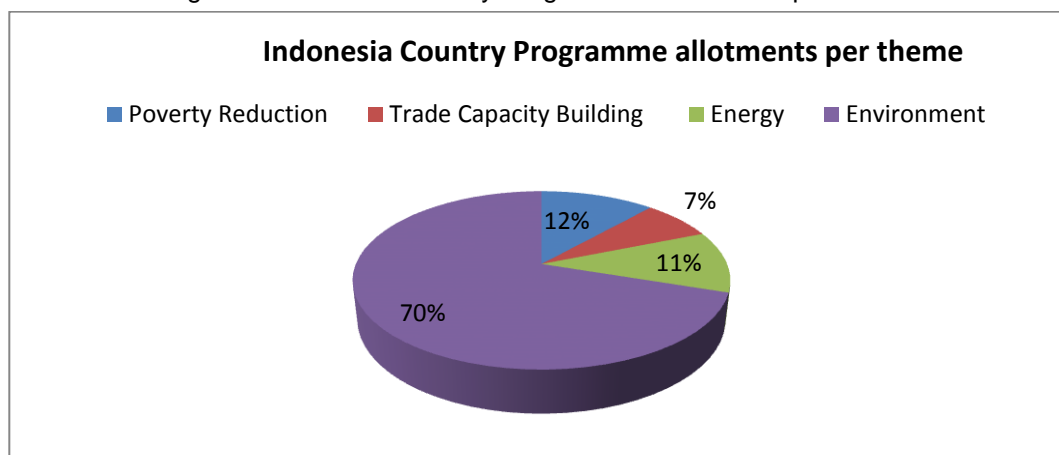
The Country Programme for Indonesia had an overall approved budget of USD 28,153,010 (including support costs) and was thus 104% funded²⁹. The Programme's major project portfolio concerned environment and energy related support with a portfolio of about 18 Million. The biggest donor is the Global Environment Facility (GEF). Other important donors are: the State Secretariat for Economic Affairs (SECO), of the Switzerland Government, the Montreal Protocol Multilateral and the Governments of Japan, Italy and New Zealand.

²⁷ Source: UNIDO InfoBase, November 2014

²⁸ Source: Information provided by the FO in Indonesia (21/10/2014)

²⁹ Source: Information provided by the Field Office of Indonesia (21/10/2014)

Figure 1: Indonesia Country Programmed allotments per theme



1.5 UNIDO presence and representation in Indonesia

The country programme falls under the responsibility of the UNIDO Field Office in Jakarta, which covers also Timor-Leste. It employs a UNIDO Representative and two staff members. The work of the Office is also supported by National and international experts and contributes to project management and implementation but there is the potential of doing a lot more and be responsible for monitoring and follow-up activities.

The official counterpart ministry of UNIDO in Indonesia is the Ministry of Industry (MOI), collaborating in fields of South-South cooperation, and in the fields of research, the transfer of technology and the promotion of investments.

This collaboration is guided by a Technical Implementation Arrangement, which was signed by the MOI and UNIDO, in July 2013. This Agreement is considered the implementation arrangement of a previous Memorandum of Understanding that was signed in Vienna on December 2007.

The two parties agree to follow a triangular approach in facilitating the activities in South-South Cooperation. This means that the MOI will provide the funds to support one fully equipped room and one staff member and UNIDO technical inputs to support the successful implementation of the approved programmes. Both parties commit to identify and look for potential donors.

As stated there, the agreement can be terminated by either party with a notice of 180 days. A withdrawal of this Arrangement should not affect the validity of any ongoing programmes or activities until their completion. The Technical Cooperation Agreement was signed for an initial period of 3 years. A written extension of the Agreement was foreseen.

UNIDO has also long term cooperation with ILO in Indonesia signed in 1991. The Organizations agreed to govern co-operation and co-ordination of activities in the promotion of industrial development. Specifically, ILO will provide advice and assistance in the establishment of comprehensive human resource development policies, strategies and plans, while UNIDO having the mandate for the development of the industrial sector, will be responsible for the activities in that sector. Both organizations agreed to assist developing countries in their respective areas in building up coherent and sustainable systems for upgrading local technological skills and managerial and entrepreneurial capabilities and integrating them into the development process in accordance with the national development strategies and priority plans of those countries.

ILO and UNIDO agreed, among other, to cooperate in research and development of training systems and methods and to in publishing and sharing the results of such research.

2. Technical cooperation - Evaluation findings

2.1 Environment and energy

UNIDO's proposed 5-year Country Program (2009-2013) is linked directly to Indonesia's national development strategies in the areas of poverty alleviation, trade and investment, energy, and environment. The country program portfolio is made up of ten projects organized in four components that follow the four strategic priorities listed above. Seven of the ten projects in the portfolio are in the area of energy and environment. The environment and energy portfolio is made up of the following projects:

2.1.1 Environment

1. UE/INS/09/004, US/INS/12/002 (SAP 100224): National network for the implementation of resource efficient and cleaner production (RECP) in Indonesia. USD 4.5 million, 2009-2013 (MoI)
2. GF/INS/12/003: Enabling activity to review and update NIPs for the Stockholm Convention on Persistent Organic Pollutants in Indonesia. Funding source: GEF, USD 225,000 (MoE)³⁰
3. GF/INS/12/001 (Prep. Ass.), 130249: Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment in Indonesia. Funding source: GEF, USD 6 million, 2013-2015 (pipeline) (MoE)
4. MP/INS/11/003: HCFC phase-out management plan (stage I, phase I) (Umbrella project to phase out HCFC-141b from the manufacturing of rigid polyurethane foam at Isotech Jaya Makmur, Airtekindo, Sinar Lentera Kencana and Mayer Jaya). Funding source: MP, USD 777,395; 2009-2013 (MoE)
5. GF/RAS/10/006, XP/RAS/11/001: Regional Plan for introduction of BAT/BEP strategies to industrial source categories of Stockholm Convention Annex C of Article 5 in ESEA region. Funding source: GEF and UNIDO, USD 1,002,034.97; 2013-2015 (MoE)

³⁰ The NIPs update project was strictly not part of the planned portfolio of projects in the CP. However it provides an overarching framework within which all the PoPs work is undertaken and therefore discussed here to provide a context

6. GF/RAS/10/003, XP/RAS/11/002: Demonstration of BAT and BEP in fossil fuel-fired utilities and industrial boilers in response to the Stockholm Convention on POPs, (Regional: Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand). Funding source: GEF and UNIDO, USD 4 million, 2010-2014

2.1.2 Energy

7. GF/INS/11/001, XP/INS/11/002: Promoting energy efficiency through system optimization and energy management standards. Funding source: GEF (full-size project), USD 2.1 million, April 2011 - August 2016 (new project end date: December 2017)
8. Development of Nias Renewable Energy through Installation of Micro Hydro Power Plant.

The environment component of the Country Program consists of 5 projects with an additional project implemented to update the country's National Implementation Plan (NIP) for Persistent Organic Pollutants (POPs) under the Stockholm Convention.

1. UE/INS/09/004, US/INS/12/002 (SAP 100224): National network for the implementation of resource efficient and cleaner production (RECP) in Indonesia

Project background

The project was initiated in 2012 with an expected completion date of in 2016 and a budget of USD 4,515,706. The project was funded by SECO – Switzerland in the amount of USD 3,996,200, with co-funding from the Government of Indonesia. The Government counterpart ministries were the Ministries of Environment, Industry, Energy, and Tourism and Creative Industries.

The overall objective of the National RECP Programme is to improve resource productivity and environmental performance of manufacturing, tourism and micro-sector enterprises with the aim of contributing to sustainable industrial development in Indonesia.

The project was designed to support the Government of Indonesia with the development and operation of the Indonesian National Cleaner Production Network (INCPN). It involves the development of national capacity in different sectors of the economy for the delivery of resource efficient and cleaner production services. The RECP project document was signed in June 2012 several years after the Country Program was initiated and funding for project start-up was made available in September 2012.

Relevance

In June 2013 the Ministry of Environment prepared a 10-year Programme on Sustainable Consumption and Production (SCP) following the endorsement of the 10 year Global Framework on Sustainable Consumption and Production in June 2012 at Rio+20. The program has three main priorities including: the integration of SCP into the Medium Term National development Strategy; develop and management of the institutions and structures for the implementation of SCP; and the integration of SCP into four thematic areas namely: green industry, green tourism, green buildings, and green public procurement. The RECP is relevant to green industry and green tourism, and through output 1 - the development of capacity for SCP implementation.

Consistent with its commitment to the Manila Green Industry Declaration, the Ministry drafted a Green Industry Roadmap in 2013. The roadmap involves the adoption of Green Industry Standards aimed at eliminating hazardous substance from production processes and standardizing the use of environmental friendly materials in consumer products. The roadmap envisages technical and financial support to industries to adopt new and cleaner process equipment, and training in cleaner production and energy efficiency. Output 1 of the RECP project is relevant to the national roadmap by delivering training in Cleaner production and Energy Efficiency. Output 2 (RECP implementation and replication) provides the basis for the development of guidelines and standards in targeted sectors while output 3 (RECP Innovation and Technology) will contribute to the adoption of cleaner process equipment in industry.

The RECP project is consistent with Indonesia's energy efficiency framework with specific focus on Industrial Energy Efficiency and with reference to Energy Management Systems and energy efficient motors, boilers etc. The areas to be covered include more efficient use of water, chemicals and other materials which will be demonstrated through the implementation of the RECP project.

The Ministry of Tourism and Creative Industries is collaborating with the Ministry of Environment on policies to support green tourism following the adoption of the 10 year SCP framework. RECP implementation in the tourism sector (Output 2.3) is relevant to this collaborative effort.

The project is relevant to UNIDO's mandate in productive use of natural resources, environmental management and safe responsible production within the framework of the joint UNIDO-UNEP Resource Efficiency and Cleaner production programme.

Efficiency

The key finding is that of delay in project implementation. The delay has been the result of several factors, key among which is UNIDO's inability to recruit a competent technical advisor to move the project forward. Developed as a relatively ambitious undertaking, the project took three years to elaborate from the concept stage to project approval. Following project approval in June 2012 a delay of four months was experienced in the transfer of fund resources from the donor. As of the time of this evaluation approximately USD 250,000 of the USD 4,515,706 have been disbursed.

As designed, the project combines execution expertise of UNIDO with national execution responsibilities. The project was designed to operate as a collective of institutions from government, private sector and civil society united by the commitment to promote the adoption of RECP. Two agencies, the Indonesian Cleaner Production Centre established by the Ministry of Environment and a newly established Indonesian Green Development Centre (IGDC) at the Institute of Technology Bandung) were to provide support to the project. The Indonesia Cleaner production Centre (ICPC) was to provide support in the areas of networking, information and advocacy while IGDC was to be the technical excellence centre and work primarily with enterprises on in-plant assessments and the development of tools and mechanisms for making technology and finance available for RECP investments and in the process promote industrial policy change consistent with the tenets of RECP. The IGDC was to operate under the Ministry of Industry. This approach would ensure national ownership and sustainability and considered by this evaluation as an efficient way to operate a complex undertaking as proposed by the project.

During project execution however, it became clear that while the national structures are in place, UNIDO was unable to find a Chief Technical advisor to provide the impetus for the activities of the two supporting agencies resulting in delays in project implementation and substantial frustration within these agencies. All project stakeholders were unanimous in questioning UNIDO's competence and ability to find a Chief Technical Advisor or, in the interim, provide a scenario in which the project could move forward while a competent CTA is sought. As of the time of this evaluation the project is managed remotely from the UNIDO Headquarters in Vienna without any competent representation on the ground. UNIDO is not unaware of the gravity of the situation. This evaluation has been advised that efforts are afoot to remedy the situation; however the nature of the solution has yet to be revealed³¹.

³¹ As of the time this document was being finalized for publication the UNIDO project manager has since accepted the post of Chief Technical Advisor and moved to his post in Jakarta.

Effectiveness and performance

At the end of project implementation, the RECP project is expected to produce five programmed outputs including:

1. RECP capacity and Network: Professional and institutional capacity for adapting and adopting RECP methods, practices and technologies strengthened and developed and widely utilize
2. RECP Implementation and Replication: RECP opportunities identified, evaluated and implemented in target enterprise groups through delivery of support services customized to the four main enterprise target groups, namely: small industries, industrial parks, tourism regions and micro-enterprises
3. RECP Policy and Regulatory Framework: policy frameworks strengthened or created that enable the realization of RECP methods, practices, technologies and synergies in particular for the target enterprise groups
4. RECP Technology and Innovation: increased availability and affordability of suitable RECP technologies for the target enterprise groups.
5. RECP Investment and Finance: appropriate financial instruments for RECP investments in target enterprise groups will have been proposed and promoted for implementation by financial intermediaries.

The project, while complex with many different actors and institutions, was carefully designed with very detailed background analysis. The relevant stakeholders were consulted during the design phase of the project. The intervention logic is clearly laid out with programmed outputs contributing to outcomes and outcomes to higher level results. These programmed outputs are expected to result in the “implementation of RECP concepts, methods, practices, technologies, synergies and policies by enterprises, governments and suppliers of business services, technology and finance”. Essentially, UNIDO’s efforts in RECP implementation have focused on different dimensions of capacity so as to improve resource productivity and environmental performance in targeted enterprises and, therefore, contribute to sustainable industrial development in the country. Whether these capacity building efforts can effectively contribute to changes in resource productivity and environmental management depends on the degree to which the immediate outcomes have effectively been achieved and the extent to which the required drivers and assumptions are present. To be sure, any evaluative judgements at this point will be purely speculative since the capacity building activities implemented to date are limited. At the time of this evaluation, project activities implemented include: 3 training events (1 start-up training, 2 National Expert training events); 3 workshops; and the identification of participant industrial parks. However, this evaluation observes that the

programmed outputs are clearly achievable but the extent to which the various dimensions of capacity can lead to the ultimate objectives of the program is uncertain. Project governance structures including the RECP Co-ordinating Committee (RRC), Project Management Committee (PMC) and the project management unit - The Centre for Resource Efficient and Cleaner Production Indonesia (CRECPI) have been established. However, they have not been functional because of the lack of progress in project implementation.

Interviews with selected workshop participants taken together with workshop participant assessments show good satisfaction with training and workshop events but there is considerable frustration from CRECPI staff, the various Ministerial collaborators, as well as the donor about the lack of progress in project implementation. Staff of CRECPI seem to be competent, motivated and highly committed and ready for the project to take off.

Sustainability/Impact

As mentioned above, the design of the RECP in which local institutions provide managerial, technical, policy and advocacy support would ensure local ownership after project closure. Trained National Experts should provide a measure of sustainability. One of the key activities in this project involves assessment of the policy gaps on which a national strategy will be developed and promoted, and subsequent sector strategies developed for the four line ministries (MoE, Mol, MEMR and MoCT). The development of this policy framework will provide a measure of sustainability. With most project activities pending however, it is too soon to determine the likelihood that results achieved in programme implementation will continue after UNIDO and donor disengagement.

Recommendations

This evaluation believes that expeditious action from UNIDO to appoint a Chief Technical Advisor will help put the project back on course and assuage the fears and frustration of the key stakeholders. In the meantime, activities that could be implemented by CRECPI in the absence of the CTA should be funded to allow the centre to continue to be functional and develop the momentum for when the CTA assumes his/her responsibilities.

2. GF/INS/12/003: Enabling activity to review and update NIPs for the Stockholm Convention on Persistent Organic Pollutants in Indonesia

Project background

The objective of the project was to review and update the National Implementation Plan (NIP) earlier developed in fulfilment of the obligations of Indonesia as State Party to the Stockholm Convention. This GEF funded project

was implemented at the cost of USD 225,000 for the duration of 12 months to be completed by the end of December 2013.

In fulfilling its obligations to the Convention, Indonesia developed a NIP document in 2008 for the twelve (12) original POPs, including pesticides, industrial chemicals, and by-products. At the 4th Conference of the Parties in 2009, nine new POPs were listed in the Annexes A, B and C of the Convention.

The 5th Conference of the Parties in 2011 listed one pesticide, technical endosulfan and its related isomers in the Annex A of the Convention, with specific exemptions for the production and use of some crop-pest complexes as listed in accordance with the provisions of part VI of this Annex. Further, the 6th Conference of the Parties in 2013 amended the Annex A of the Convention by listing one more industrial chemical, hexabromocyclododecane (HBCD) with time-limited exemptions for production and use in expanded polystyrene (EPS) and extruded polystyrene (XPS) insulation foams in buildings.

This project was not originally part of the Country Program. However, with the addition of these new chemicals, Indonesia like all other signatories to the convention, was required to carry out a review of the National Implementation Plan (NIP). This project undertakes this review to update the previous NIP and accommodate the new POPs.

Relevance

Indonesia has been a signatory to the Stockholm convention since 2001. It had prepared and, indeed, endorsed a National Implementation Plan on POPs. The project is very relevant to the country in meeting its obligations under the Stockholm convention which requires the submission of NIPs. It is also consistent with the UNIDO mandate to promote and accelerate inclusive and sustainable industrial development in developing countries and economies in transition with particular reference to environmentally sound industrial production with the aim of reducing environmental degradation. The project was executed by the Ministry of Environment. There seemed to have been a strong sense of ownership and the Ministry officials interviewed during this evaluation considered UNIDO as an effective partner with strong comparative advantage in POPs.

Efficiency

The project duration was 12 months to be completed in December 2013. Due to difficulties associated with the lack of understanding of the new POPs and particularly in relation to sampling and analysis techniques and the reluctance of some companies to provide information, the project was extended until May 2014. The NIP was finally signed in December 2014 but has yet to be submitted to the Conference of Parties (COP). MOE admits that the delay in the submission

of the NIP is related to problems associated with coordination among the Ministries and within MOE.

Effectiveness and performance

The NIP has been updated. There now exists a reasonably good database for POPs including unintended releases. The updated NIP now forms the basis for ongoing work in the country on PCBs and other higher level POPs such as dioxins and dibenzofurans. The principal output, an updated NIP, was prepared and signed in December 2014 but has yet to be submitted to the COP as a result of some delays in the MOE. In spite of the delay in its submission, the updated NIP now provides the framework within which all POPs work will be undertaken. While the NIP has yet to be submitted to the COP, some GEF projects such as the "Regional Plan for introduction of BAT/BEP strategies for Industrial Source Categories of Stockholm Convention in ESEA region" project and the "Demonstration of BAT/ BEP in Fossil-Fuel Fired utilities and industrial Boilers" project were developed and implemented within the framework of the updated NIP.

Recommendation

MOE should expedite its internal processes for the submission of the NIP to the COP in order to benefit further from additional potential resources for the implementation of POPs projects.

3. GF/INS/12/001, SAP 130249: Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment in Indonesia

Project background

The objective of this project was to (a) introduce and implement a PCB management system to reduce and/or eliminate releases from PCB wastes stockpiles and PCB-containing equipment and (b) dispose of at least 3,000 tonnes of PCBs wastes and PCB-containing equipment in an environmentally-sound manner maximizing opportunities for public-private partnership. The initial inventory of PCB waste and PCB contaminated equipment was developed in 2004. Total budget for the project was USD 7,200,000 for Project Preparation Grant (PPG) and Full-sized Project (FSP) for implementation over the period between 2013 and 2015.

Relevance

The project was designed to help Indonesia meet its obligations under the Stockholm Convention and thus, will contribute to global efforts to control toxic chemicals in general and to eliminate PCBs in particular. It also indirectly

contributes to the objectives of two other international environmental agreements, i.e. the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and Their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemicals. The project is very relevant to UNIDO's mandate and fits perfectly within the United Nations Partnership for Development Framework (UNPDF).

Five (5) outcomes and eleven (11) sub-outcomes were identified for the UNPDF 2011 – 2015 as targets for UN support in Indonesia. PCB management and destruction activity is covered under Outcome 5: Climate Change and Environment of the UNPDF. The outcome aims at strengthening climate change mitigation and adaptation and environmental sustainability measures in targeted vulnerable provinces, sectors and communities.

The PCB management and destruction project contributes to the reduction and elimination of POPs (Stockholm Convention on POPs) which is an indicator of the output Policy/legal/institutional framework strengthened for implementation of major MEAs. The project is consistent with GEF-5 Chemicals Focal Area objective CHEM-1 "Phase out POPs and reduce POPs releases"; Outcome 1.4 "POPs waste prevented, managed and disposed of and POPs contaminated sites managed in an environmentally sound manner"; Output 1.4.1 "PCB management plans under development and implementation". The project focuses on the environmentally sound management (ESM) of PCBs and will directly and indirectly activate funds and investments for the safe control, management and disposal of PCBs and PCB-containing equipment and waste in the country.

UNIDO has implemented a large portfolio of projects in the POPs focal area of the GEF and maintains strong comparative advantage in providing technical assistance on the ESM of PCBs. UNIDO has also built a solid reputation in the area of PCB management comprising approximately 35% of current post-NIP projects. In general, UNIDO's PCB management efforts create fundamental capacities within governments and among PCB owners and enhance the regulatory and legislative infrastructure and strengthen institutions at national and local levels to manage PCB-containing equipment. Building capacities in local laboratories for PCB sampling and analysis, transfer of technological know-how for local PCB treatment and elimination and undertaking inspections at PCB-contaminated sites assures compliance to the PCB-related legislations. Environmentally sound PCB management practices will be put in place and PCB-owners would reduce PCB releases and risks to human and environmental health.

Efficiency

As a result of a very long country project registration process, there was a delay of 7 months in project implementation. The decision by MOE to use "unproven"

technology for the treatment and disposal of contaminated PCB contaminated equipment and PCB waste is causing further delay in project implementation because the GEF would not fund unproven technologies. This evaluation has learned that a compromise which involves the MOE installing its preferred stationary technology paid for by the government of Indonesia while the project deploys a mobile technology for use outside Jakarta has been forged. UNIDO would, in addition, provide expert support to the MOE selected technology using project funds. Such a compromise, together with enhanced project management capacity within MOE, should allow the project to proceed more expeditiously.

Effectiveness and performance

The PCB project was designed with 3 key components. Component 1 focuses on the review, formulation and enforcement of policies and regulations directly relevant to PCB management in the country. Component 2, involves several dimensions of capacity including the needs of government officials at central and provincial levels as well as managers and workers at state-owned (PLN-electricity company, PERTAMINA-oil company, etc.) and private entities (industry, transformer manufacturers, transformer service providers, relevant associations, NGO, etc). No laboratory in the country is accredited to analyze PCBs. As part of the outputs for Component 2 therefore, technical and human resource capacity was to be enhanced in laboratories, particularly of PUSARPEDAL and those of PLN to enable the preparation of an extended inventory in the country. Component 3 of the project addresses activities to be undertaken to demonstrate environmentally sound management and disposal of PCBs. ESM of PCBs was to be demonstrated through proper collection, packaging, labelling, registration, transportation, storage and disposal of targeted PCB wastes and PCB contaminated equipment. Using the data generated from the extended inventory and under a broad stakeholder involvement, a detailed PCB phase-out plan was to be developed for prioritized provinces with the potential for elaborating a country-wide plan. The inventory was also to provide the basis for the direct disposal of PCB-contaminated oil and PCB wastes.

At the time of this evaluation, and given the delays experienced in project implementation, no substantive accomplishments can be reported. The Ministry of Environment in collaboration with BPPT, Badan Pengkajian dan Penerapan Teknologi (Agency for the Assessment and Application of Technology) has conducted a review of PCB waste disposal technologies and selected an in-situ technology which it intends to deploy in Jakarta. While GEF grants cannot be used to fund untested technologies, UNIDO will provide technical expertise to support such deployment but will, in parallel, deploy a mobile technology to serve as a backup system for use in the country outside Jakarta.

Impact/Sustainability/Challenges

While the decision by the MOE to build a facility of their choice has caused substantial delays in project implementation the decision by UNIDO to provide technical support to the process is a reasonable one and could provide a measure of sustainability because there would be local ownership. An alternate (back-up) technology should be identified in the event the MOE selected technology fails to work adequately. Sustainability is also assured through the involvement of PCB equipment owners and private companies providing services for the collection, transport, interim storage and final disposal under the control of responsible governmental institutions within the framework of the relevant legislation. A key challenge is the lack of capacity to sample and the analytical capacity for PCBs and U-PoPs.

Recommendations

PCBs and U-POPs should be focus for POP's work. Sampling capacity for PCBs and U-POPs should be enhanced and analytical capacity developed if not in Indonesia then in the region.

4. MP/INS/11/003: HCFC phase-out management plan (stage I, phase I) (Umbrella project to phase out HCFC-141b from the manufacturing of rigid polyurethane foam at Isotech Jaya Makmur, Airtekindo, Sinar Lentera Kencana and Mayer Jaya)

Project background

At its 19th Meeting in September 2007, the Parties to the Montreal Protocol agreed to accelerate the phase-out of the production and consumption of hydro chlorofluorocarbons (HCFCs) by 10 years as per Decision XIX/6. That decision imposed an obligation on parties to freeze their base line production and consumption levels of HCFCs in 2013, and reduce their production and consumption by 10 % by 2015.

This project involves the phase-out of HCFC-141b used in the manufacture of rigid foam for insulating purposes through conversion to pentane blowing technology at four companies. The project includes technical upgrade of existing presses as well as the purchase of new machinery. In addition, technology transfer, safety, and on-the -job training, maintenance of new equipment and incremental operating costs are part of the project deliverables.

The project was expected to phase-out of 10.4 ODP tonnes of HCFC-141b, thereby, contributing to the country's obligation to freeze HCFC consumption by 2013 and to reduce by 10% in 2015. Successful implementation of the project was expected to result in the reduction of 66 tonnes of CO2 equivalent in addition

to ozone saving benefits. The project was funded by the Montreal Protocol for a total of USD 777,395.

Relevance

The project is very relevant to the country in meeting its obligations under the Montreal Protocol and consistent with UNIDO mandate. The project is relevant to UNIDO's mandate in productive use of natural resources, environmental management and safe responsible production within the framework of the joint UNIDO-UNEP Resource Efficiency and Cleaner production programme. UNDP is lead implementing agency of the project with UNIDO as Executing partner.

Efficiency

Significant delays were experienced in project endorsement from MOE. Designed for implementation over a 24-month period, the project which was prepared in August 2010 was finally signed in June 2013. The allocated project budget which became available in 2013 could not be utilized and had to be carried over to 2014/15. The reasons for the delay in project implementation relate, in part, to the lack of effective communication between UNIDO and MOE. At the outset, there seemed to have been clear disagreement on how procurement was to be organized. The Ministry of Environment considered project resources as belonging to the Government of Indonesia and expected to be responsible for organizing the procurement processes according to government regulations. At the minimum, they expected to approve the procurement process. MOE argues that UNIDO organized procurement of goods without approval of government in contravention of the section 6.3 of signed project document and informed MOE informally. UNIDO, on the other hand, was the implementing agency and had to follow its internal procurement rules as the organization that has financial accountability to the COP. These inconsistent positions caused substantial delays in signing the project. In addition, international suppliers for the technology and new equipment could not be found in time causing further delays in project implementation. Suppliers were finally selected in October 2014. While these delays occurred the beneficiary companies were required to invest substantial amounts of leveraged resources as their contribution to the project.

Effectiveness and performance

UNIDO was requested by government to deal with the solvent part of the phase-out. Aware that the potential for substantive intervention on solvents is limited, UNIDO leveraged work from the World Bank and UNDP to create an umbrella project in the foam sector. The Suppliers were finally selected in October 2014. Four (4) companies were selected to receive equipment. The equipment has now been procured and the industry partners interviewed are comfortable with the delivery date. The outstanding issues relate to customs clearance. The partners are concerned that the customs waivers granted to the UN agencies

may not necessarily apply to them hence increasing the costs to them of this project.

Impact/Sustainability/Challenges

Current updated government regulations on ozone depleting substances would ensure the phase out of HCFC141b. The project provides a clear example that effective public-private partnerships have the potential to help phase out ozone depleting substances. The project was essentially managed from Vienna. Both MOE and the industry partners interviewed note the lack of adequate communication between UNIDO HQ and project stakeholders. Indeed, MOE is now in communication with UNDP for implementation of the second stage of the project. In effect, as a result of poor communication between the Ministry of environment and UNIDO there has been lost opportunity to build on this public-private partnership to phase out HCFCs.

Recommendations

This evaluation believes that lack of adequate communication between UNIDO and the project stakeholders accounted for the misunderstandings with MOE and the subsequent loss of the opportunity to work on the next phase of this project. There seems to be a need for improved communication between UNIDO and government partners and delegated authority to the UNIDO Representative to make the processes of project implementation more efficient.

5. GF/RAS/10/006, XP/RAS/11/001: Regional Plan for introduction of BAT/BEP strategies to industrial source categories of Stockholm Convention Annex C of Article 5 in ESEA region

Project background

The East and South East Asia ESEA BAT/BET forum is a UNIDO initiative at the regional level to introduce Best Available techniques (BAT) and Best Environmental practices (BET) into priority sectors defined by the respective countries based on their National Implementation Plans developed under the Stockholm convention. The Forum was launched in October 2007 at an inter-ministerial meeting in Bangkok. The primary objective of the Forum was to create a non-binding framework within which regional cooperation on the development, diffusion and deployment of BAT and BEPs can take place. The forum would collectively update knowledge on technologies, sampling an analysis, and research. In addition, it will contribute to the global monitoring of U-POP releases using a regional approach based on local standards, laws and regulations. The project was funded by the GEF for a total USD 1,002,034.97. The duration of the

project was 2007-2011. At the end on the project a final evaluation³² was undertaken. The narrative below draws substantially from the evaluation.

Relevance

The project is considered very relevant to the country by all the stakeholders interviewed. In general, the expected growth in industrialization in the participating countries makes the project objectives relevant to environmental issues in general and chemicals management in particular.

The project addresses Indonesia's obligations under the Stockholm Convention. Article 5 of the Stockholm Convention states that each party shall develop an action plan or, where appropriate, a regional action plan to reduce the total releases of chemicals listed in Annex C, with the goal of their continuous minimization and, where feasible, ultimate elimination. The project assisted in the implementation of BAT/BEP related action plans of the participating countries as reflected in their respective National Implementation Plans (NIPs).

Efficiency

Based on the interviews, assessment reports, and the responses to the to the questionnaires distributed during the evaluation, the evaluation concluded that, in general, the planned training activities were organized in an efficient and satisfactory manner with the resources at the disposal of the project. The regional approach facilitated a more efficient learning and knowledge transfer among the participating countries.

Several training events on new technologies and processes have been conducted. Activities with potential long term effects such as guidelines on Cleaner Production methodologies have been developed. The emissions inventory has been based on the analytical measurements made at selected facilities in the participating countries. The project has conducted training courses for laboratory personnel on sampling methods of U-POPs, sample preparation and analysis. In addition, the project has helped in the establishment of certified monitoring laboratories. Training courses for certification in applied analytical methods for U-POPs have also been organized. Further, the project has promoted training courses for certification of technical laboratory personnel, including hazardous operations. These training and certification processes established constitute a very efficient way of building regional and country capacity.

Effectiveness and performance

³² Independent Terminal Evaluation of the UNIDO-GEF Project title: "Regional plan for the introduction of BAT / BEP strategies to industrial source categories of the Stockholm convention annex c of article 5 in the ESEA region", UNIDO January 2014

The project successfully established a regional coordination platform for information exchange and technical discussions. It facilitated capacity building in the area of BAT and BEP, particularly in the four priority sectors targeted. Gaps in the legislations which have been identified were, in some cases, filled; however, enforcement has been delayed due to the scarcity of resources to implement activities in the forum work plan.

Some of the most significant results of the project have been:

- The creation of a regional coordination mechanism that has enabled sharing of experiences and provision of technical support and expertise among the participating countries.
- Successful involvement of the private sector in the project activities. The pilot facilities industries identified have made investments in adopting BAT/BEP in their respective companies.
- To date, two full-sized projects on priority sector-related to the project have been approved by the GEF.
- “Demonstration of BAT and BEP in the Fossil Fuel-fired Utilities and Industrial Boilers in response to the Stockholm Convention on POPs”
- “Introduction of BAT/BEP in Open Burning Activities in the ESEA region”.
- The regional guidelines and guidance on BAT/BEP for the fossil fuel-fired utilities and industrial boiler sector incorporated the regional experience gained through the pilot demonstration activities. Other full-sized projects addressing thermal processes in the metallurgical sector and waste incineration have been drafted and at the time of the evaluation were pipelined for the next GEF cycle. The MSP has largely contributed to the assessment of the sectors.
- Capacity built in dioxin sampling and analysis has to be considered an important output of the project. Implementation of the training on dioxin through the leadership of China and Vietnam is seen as an effective result of regional coordination.
- Training for technicians in the relevant sectors created awareness on process improvement and emission reduction through the introduction of BAT/BEP measures. As an example, the boiler operator’s training organized was successful in introducing linkages between steam efficiency and productivity.
- Baseline studies on local and traditional practices have been produced:
 - Survey on boilers using biomass and used oil in the Philippines
 - Fish residue as fuel in Cambodia;
 - Lao PDR completed a study on used oil-fired boilers and follow-up activities are planned to apply BAT/BEP on these boilers
 - In 2012 Mongolia conducted a study on the use of low pressure furnaces and stoves;
 - A survey on the market and trends of the use of biomass in Indonesia was conducted in 2012. The survey identified three types of biomass,

namely, palm fibre, palm kernel and biogases as the most commonly used in Indonesia.

- On strengthening of policies:

- Mongolia, Lao PDR and Cambodia have drafted their Boiler Act;
- China has issued “Guidelines on Best Available Technologies for Pollution Prevention and Control for Medical Waste Treatment and Disposal” in January 2012. These guidelines serve as technical guidance document.
- The BAT/BEP requirements were amended into the “Law on Environmental Impact Assessment of Mongolia” in 2012 as a prerequisite to start a BAT/BEP project.
- Thailand has issued dioxin standards for priority source categories including metallurgical, waste incinerator and crematoria.

Following a detailed systems audit, engineers and technicians have been trained to identify key areas for improved efficiency using good engineering practices. Further, regional baseline reports for fossil fuel-fired utilities and industrial boilers, metallurgical, waste incineration and open burning have been drafted. Two annual workshops on BAT/BEP related topics were organized for each participating country and a regional coordination networking mechanism has been established. With the support of the ESEA Forum and the Basel Centers of Asia-Pacific and South East Asia, the project has also addressed new POPs through the drafting of an e-waste project.

Through the activities of the project, pilot universities and laboratories have been identified to collaborate, develop curricula and offer courses and training on BAT/BEP for the application of pollution prevention measures. In-plant training in selected priority sectors was undertaken. Participants of all the countries involved acknowledged UNIDO’s assistance through the provision of experts on BAT/BEP as very helpful. The participating countries are introducing Unintentional-POPs emission standards in some priority sectors. Workshops for disseminating the information on U-POPs and BAT &BEP and for rising awareness on this issue have been held.

In sum, the project has been successfully implemented. The capacity building and awareness raising outcomes planned to facilitate the reduction in U-POPs emissions have been achieved. While partnerships with specialized international laboratories on dioxin analysis have been established, dioxin sampling and analysis, training, and capacity building remain an urgent need. These require resources yet to be mobilized.

Impact/Sustainability/Challenges

Guidelines prepared by the Stockholm Convention Secretariat have been translated by the participating countries into their national languages for the purposes of awareness-raising. Workshops for disseminating information on U-POPs and on policy frameworks on BAT/BEP have been organized in partnership with the Swedish EPA with the participation of all member countries. The drafting and promulgation of laws standards and guidelines as well as experiences shared will go a long way to ensure some measure of sustainability of Forum activities in the participating countries.

The main objective of the project has been satisfactorily achieved. However, some activities such as the ones related to sampling and monitoring of U-POPs releases in the metallurgical and waste incinerator sectors have not been fully achieved because the initial funding was not sufficient to complete planned activities.

The evaluation rated the overall implementation progress as satisfactory with some marginal shortcomings. After three years of implementation and in the absence of adequate funding, adequate training in dioxin sampling as well as laboratory analysis capacity, it is difficult to foresee and assess the future of project sustainability.

Recommendations

The evaluation made the following recommendations:

1. It is recommended to further improve the training activities. In particular, the training should involve relevant personnel in operational and technical roles using predetermined selection criteria. Duration of training events should be extended by an additional week and training should also cover other sources such as ambient air.
2. It is recommended that standards for stack sampling be establish. In some countries this is necessary to make training activities useful.
3. The evaluation notes that collaboration with the private sector has been extremely useful and recommends its continuation.
4. It is recommended that the Governments develop new policies and enforce the necessary guidelines. The policies issued may then be used as the basis/guidance for industry to implement Best Available Techniques and adopt Best Environmental Practices. In addition it is recommended that ambient air quality standards on persistent organic pollutants be established.

5. Future follow-up projects derived from the experience of these regional projects should stress the importance of the training and of the study tours. They have been viewed as very useful and have consequently encouraged the companies to pay attention to the environmental quality and the proper management of emissions.
6. It is recommended to maintain and reinforce the networks created as result of the project. Information exchange with other companies (national and international) is very important for creating awareness and outlining the opportunities for better process efficiency.
7. Sustainability of project activities should continue to be demonstrated through the inclusion of BAT/BEP concepts in university curricula. In some participating countries this has already been achieved.
8. It is recommended that in future similar projects, proper needs assessment should be undertaken as the basis for determining project activities.
9. The evaluation recommends actions for continuing regional cooperation for monitoring and analysis. The need exists for a laboratory with the capacity to analyze higher level POPs and it is recommended that Indonesia should consider establishing such a facility.
10. In some countries regulations on dioxins are in place but analytical and technical capacities are still insufficient. The project through the training conducted on dioxin analysis and laboratory establishment has contributed to the enforcement of the laws. It is, therefore, recommended that future projects foresee the establishment of certified laboratories, the delivery of appropriate equipment and trained technicians for conducting the sampling and the analysis.
11. While the project budget was sufficient to implement project activities, government counterparts did not contribute to the budget as expected and in proportion to the needs. It is recommended that participating countries should allocate appropriate budgets to deal with the problem of UP-POPs.

6. GF/RAS/10/003, XP/RAS/11/002: Demonstration of BAT and BEP in fossil fuel-fired utilities and industrial boilers in response to the Stockholm Convention on POPs, (Regional: Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand)

Project background

The project aims to reduce and, where feasible, eliminate unintentional POP releases through capacity building at the regional level to implement BAT/BEP

measures in the fossil fuel-fired utility and industrial boilers source category. The project also aims at increasing energy efficiency through appropriate selection of technologies. The ESEA BAP/BEP forum was the first regional forum established to introduce Best Available techniques (BAT) and Best Environmental practices (BET) into priority sectors defined by the respective countries based on their National Implementation Plans developed under the Stockholm convention. The fossil-fuel fired utilities and industrial boilers source category was identified among the priority sources for the introduction of BAT/BEP. This GEF funded project was designed as a regional project for a total of USD 13.1 million of which USD 4.0 million was GEF funds with the participation of six ESEA countries including the governments of Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand. USD 9.1 million was co-financing from the participating countries. The project duration was 4 years from April 2010 to April 2014.

The project has 6 main components. They are:

1. Formulation of Regional guidelines and guidance on BAT/BEP for fossil-fuel fire utility and industrial boilers consistent with the requirements of the Stockholm Convention.
2. Dissemination of pollution prevention and cleaner production measures on fossil fuel fired utilities and industrial boilers source category.
3. Establishment of regional U-POPs baseline inventory on fossil fue-fired utilities and industrial boilers
4. Regional coordination in developing human resource capacity
5. Capacity Building in sampling and analysis at industrial sources of U-POPs
6. Management, Monitoring and evaluation.

Component 3 involves the development of an inventory. It indeed envisaged the replacement of obsolete boilers with low-emission boilers and planned to conduct sampling and analysis of flue gas in selected boilers before and after implementation of BAT/BEP to demonstrate the effectiveness of the measures to reduce U-POPs.

Through guidelines/guidance documents and their dissemination, training in sampling and analysis techniques, inventorying, and replacement of obsolete boilers the project intended to provide the capacity within participating countries to monitor BAT/BET measures, reduce and ultimately eliminate U-POP releases from fossil fuel-fired utility and industrial boilers.

Relevance

The project is relevant to the GEF POPs focal area strategies as its main purposes are to establish and disseminate BAT and BEP in the industrial sector to reduce the emission of U-POPs. The expected growth in energy demand in the participating countries makes the project very relevant to global and national

environmental concerns in that promoting, for example, the use of more efficient boilers will allow for a significant reduction in GHG releases.

Efficiency

The mid-term evaluation³³ of the Fossil-Fired Utility and Industrial Boilers project noted that:

- Benefits achievable with BAT/BEP, considering the energy saving that may be achieved, are considered far greater than the cost of project implementation;
- The bidding procedures established by UNIDO with the assistance of international experts allow for the selection of options based on the best value/cost ratio;
- Wider ownership by the participating countries was required. However, the project seemed to have balanced adequately international expertise with national expertise. The budget allocated for international experts is in the order of 10% of the overall GEF grant. The contribution of UNIDO HQ and international experts is considered highly satisfactory by all the project partners.

Effectiveness and performance

A number of capacity building activities have been conducted under the project. The capacity building work covered the activities described below. Relevant institutions were identified in Cambodia, Indonesia, Philippines and Thailand to conduct training programs for graduates and government officials as well as well as boiler operators on site.

Specifically, training was conducted on: (i) boiler operator in Singapore, (ii) laboratory staff on dioxin analysis in New York, (iii) boiler curriculum in Bangkok, (iv) dioxin sampling analysis in Beijing, (v) operations of Combustion Facilities and BAT/BEP Facilities in Rome, (vi) Green Boiler Technology Course for academia from Jakarta and Bandung.

Workshops were conducted on: (i) Best Environmental Practice (BEP) implementation in power plants & Dioxin Sampling in Pusarpedal, Suralaya and Semarang Power Plants, (ii) on BAT/BEP implementation for improving boiler efficiency and reducing dioxin emission in Jakarta for academia, laboratories, industrial and power plants boilers (iii) on Green Boiler in Cilegon in cooperation with Sultan Ageng Tirtayasa University.

³³ Regional (Cambodia, Indonesia, LAO PDR, Mongolia, Philippines, Thailand): Demonstration of BAT and BEP in Fossil-Fired Utility and Industrial Boilers in Response to the Stockholm Convention on POPs, Mid-term Evaluation Report, February 28, 2013

Analyses of U-PoP emissions have been carried out by local and international laboratories under the supervision of international experts. To address the issue of limited analytical capacity, an assessment of in-country analytical capacity was undertaken by UNIDO and international experts. Also through the bidding processes, they ensured that the contracted laboratories have the proper qualifications.

The project is collaborating with universities on the development of a Green Boiler Curriculum. Boiler Inventory Update and Surveys on biomass market issues and trends for use as fuel for boilers have been undertaken. A Memorandum of Understanding with the first pilot company (Suralaya Power Plant) has been signed. Sampling and analysis of U-POP emission at pilot facilities to establish baseline conditions failed to identify dioxin at the Suralaya plant. A review was also undertaken at a second pilot company including a visit by an international expert to the Goodyear Tire company which will implement some interventions to increase boiler efficiency and reduce dioxin emission. The mid-term evaluation noted that the envisaged 12 pilot facilities was an overly optimistic target because even at the time of this evaluation in 2015, only 2 pilot facilities had been established.

A substantial number of technical reports³⁴ have been prepared by national experts, international experts and National Project Managers. The mid-term evaluation noted, however, that the results of the project will benefit from better systematization of the technical reports produced and ensuring that the reports follow consistent quality standards and formats and to make them available to all participating countries.

Regarding the revision and adoption of new regulations, Cambodia was developing legislation on boiler safety and Indonesia's Boiler Act has been amended to include environmental provisions. The Act has since been submitted for the approval of the Parliament.

At the regional level, energy outlooks and preliminary BAT/BEP guidance documents have been drafted and training materials on the environmentally sound management of boilers have been prepared. Boiler inventories have been updated in the Philippines and Mongolia and technology markets surveys on air pollution control systems have been carried out. With regards to the demonstration of BAT/BEP in up to 12 facilities, one boiler has been delivered to Cambodia. The Philippines submitted a report on biomass and spent oil-fired boilers, a draft study was also prepared by Lao PDR on waste vegetable oil and waste lubricant oil and a report on the inventory of low pressure furnaces has been prepared in Mongolia. Sampling and analysis were conducted in Cambodia,

³⁴ Technical reports on market analysis, BAT/BEP, Health and Safety, Use of specific fuels, energy outlooks etc.

Indonesia, Lao PDR, Philippines and Thailand. In general the concentration of U-POPs in the industrial plants was much lower than expected. However, there was concern about the reliability of the results.

Impact/Sustainability/Challenges

With regards to training, there is a need to ensure the handover of the training activities from UNIDO HQ international experts to national institutions. Training of trainers should be completed and should provide measurable results. A system of training curricula in the universities and colleges would go a long way to sustain projects outputs and outcomes. Legislation promoting the use of BAT/BEP compliant boilers will be sustainable after project completion only when. Small industrial facilities may have not enough financial resources to afford the investment into new technologies to replace obsolete boilers therefore, it is important that appropriate financial mechanisms be deployed to overcome these constraints. Indeed, owners of small boilers are even not aware of the possibility to achieve economic benefit by replacing their boilers with more efficient, low-emitting boilers. Awareness-raising activities are necessary to ensure that these small holders understand the potential benefits of the deployment of new technologies.

7. GF/INS/11/001, XP/INS/11/002: Promoting energy efficiency through system optimization and energy management standards

Project background

This GEF funded project was designed to build capacity of stakeholders, including industrial enterprises, equipment suppliers, distributors, engineering/energy service companies and government planners to develop services focused on capturing system level efficiencies. Estimated potential for improvement in systems efficiency is 20% to 25% for motor systems and 10% to 15% for steam systems. With the introduction of ISO energy management standards, energy efficiency will be integrated into management systems of industrial enterprises to accelerate the adoption of energy efficient best practices on a continuing basis with the expectation of improved reliability of the operations and productivity of enterprises. In addition, the competitive position of companies will be enhanced through subsequent adoption of energy efficient-operation into the ISO certification process. The project was also designed to contribute substantially to meeting Indonesia's goal to reduce energy intensity, energy elasticity and greenhouse gas emissions.

The project is made up of four substantive components. The fifth component basically articulates the project management system. The first component involves compliance with a policy instrument that encourages industrial enterprises to adopt ISO energy management standards to deliver sustainable

improvements in industrial energy efficiency and improve competitiveness. The energy management standards were designed to provide enterprises with a management structure and process for continuously improving energy efficiency which would result in a change in corporate culture through the integration of energy efficiency in the management systems.

Component 2 involves the building of capacity through tools and training on Energy Management, including industrial systems optimization, to enable industries comply with ISO standards. This capacity building component was to produce energy efficiency professionals within industrial facilities and as consultants and suppliers to initiate a market transformation process that would effectively manage energy and optimize industrial systems.

The third component, the development of financial capacity to support energy efficiency projects in industry would provide financial and institutional support for industrial energy efficiency initiatives.

The fourth component would demonstrate operational projects resulting from adoption of energy management standards and system improvement projects to make operations of enterprises more energy efficient and cultivate energy efficiency practices into corporate management.

The budget for the project was USD 2.1 million for implementation over a period of seven years from April 2012 to December 2017.

Relevance

The project is consistent with and supports GEF-4 Climate Change Strategic Program 2; promoting energy efficiency in the industrial sector. By addressing key existing barriers to information, technical capacity and markets for sustainable IEE in Indonesia, the project will directly contribute to promoting and increasing the deployment and diffusion of energy-efficient technologies and practices in industrial production and manufacturing processes. The project also makes a tangible contribution to stimulating the creation of an Indonesian market for IEE products and services. The project is consistent with government strategy on energy and sustainable energy development. The increasing greenhouse gas emissions arising from fossil fuel combustion in industry and power generation and the increasing prices of fuel at the international markets is of considerable concern to government because it constitutes a threat to the environment and economic sustainability. The government is also conscious about the need to improve the competitiveness of industry by reducing production cost and promoting sustainable and low-carbon development.

The project is consistent with UNIDO's mandate and core competences as well as its comparative advantage as a GEF implementing agency in the area of

sustainable energy and climate change. The organizations' mandate is to support inclusive and sustainable industrial development, having strong core competences in the field of green industry, cleaner production and sustainable energy.

Efficiency

This project was approved for implementation in January 2011. However, the project effectively started in April 2012. The delay of about one and a half years was a result of the rather long administrative and coordination processes among stakeholders required for final registration in the Ministry of Finance and National Planning (BAPENNAS). The inception workshop was conducted only in June 2012. UNIDO had however anticipated the delay and was proactive in initiating the bidding processes and documentation for the purchase of project equipment which, to some extent, ameliorated the effects of the delay. However, the delay necessitated an extension to the project until December 2017 from August 2016.

The project itself seems to be well-formulated with a coherent intervention logic. Assumptions and indicators are clearly formulated consistent with the GEF project design protocols.

Effectiveness and performance

Over the 3 years of project implementation, a tremendous amount of work seems to have been accomplished. With respect to ISO 50001 Energy Management Standard (EnMS) training activities, Executive Briefing events have been undertaken. Ten (10) 2-day training events for Industries and National Expert candidates were organized (10 times, 378 persons). A total of 21 pilots companies were supported by NEC to implement ISO 50001. Five (5) pilots companies, Indah Kiat Pulp and Paper (IKPP) Tangerang (Pulp paper), Apac Inti Corpora (textile), Chingluh (Textile), Indolakto (Food), Lontar Papyrus (Pulp paper) were certified to ISO 50001 Energy Management System. IKPP is the 1st certified to ISO 50001 in South East Asia, and Apac Inti Corpora is the 1st integrated textile certified to ISO 50001 in Indonesia. Regarding ISO 50001 energy management standard policy advice and National Campaign, 5 national campaigns were conducted in, Jakarta, Kalimantan, East Java, Central Java and Batam. BSN adopted ISO 50001 as SNI (national standard of Indonesia) in December 2012.

MEMR initiated the adoption of ISO 50001 Energy Management System in the revised SKKNI (national personnel competence standard) on energy managers, which will boost the adoption of ISO 50001 among big energy consumers. KAN (national accreditation body) had issued the accreditation scheme of ISO 50001 which will support the accreditation body in certifying ISO 50001.

System Optimization capacity building activities associated with steam, pump, and compressed air have involved twelve (12) 2-days training events for industry personnel on steam system (SSO), pump system (PSO) and compressed air system optimization (CASO). Five (5) expert training events were also carried out on SSO, PSO, CASO in selected host industries. Besides training activities 37 pilot assessments were completed by SO National experts. Over 70 projects on system optimizations were identified during the assessments. The identified projects have the potential to reduce CO2 emissions by up to 92,784 tons/year, with potential saving of USD 10.76 million per annum. In addition to these capacity building activities, steam, pump and compressed air system briefings have been carried out.

With regards to energy efficiency financing, stakeholder working groups have been established to develop EE finance training materials. Membership of the groups includes MEMR, UNIDO, OJK, MoFI, MOI, ESCO association, and Bank. Training events were organized for Banks on EE financing at Bogor and Surabaya. Letters of Intent were signed by UNIDO and PIP (Government Centre for Investment Unit) on EE investment for UNIDO pilot projects. Peer to Peer network events were organized to facilitate cooperation between industry, national experts and banks/financial institution on EE projects. Table 1 below is a summary of project accomplishments.

Table 1: Summary of accomplishments

1. Energy Management System (EnMS) ISO 50001 Outputs	Target	Achievements Jan 2015
Executives Briefing	300 executives	180 executives
Trained Industries personnel	200 persons	378 persons
Trained National Expert	25 experts	43 experts
EnMS Pilots companies	25 companies	21 companies
EnMS planning adoption	150 adoption	to be confirmed
2. System Optimization (Steam, Pump, Compressed Air) Outputs		
Trained Industries personnel	200	382
Trained National Expert	45	46
SO Assessment	60	37
Vendors Trained	50	84
SO Project Implemented	35	To be confirmed
3. EE Financial Capacity Development		
Banks/ Financial institutions and Industries Energy Managers are trained on EE financing		Training material completed, 29 Banks staff were trained and 50 energy managers were trained

4. CO2 Saving		
Direct ³⁵	67,442 tons	108,899 tons (31,114 tons/year) ³⁶
Indirect ³⁷	522,558 tons	to be confirmed
5. Policy Advice on EnMS, SO and Sustainability		
ISO 50001 energy management system		had been adopted as SNI 50001 in 2012
SKKNI on energy manager		was revised to adopt ISO 50001 in 2014
ISO 50001 accreditation scheme		was issued in 2014

Sustainability/Impact

Energy Management Systems policy advice has been provided. This resulted in the adoption of ISO 50001 energy management system as SNI 50001 in 2012. SKKNI on energy management was revised to adopt ISO 50001 in 2014. An accreditation scheme for ISO 50001 was issued in 2014 and the Indonesia Energy Foundation (YEI) has been established as EnMS, SO and EE expert pool and service centre. Discussions have been held with government partners to help institutionalize and promote the adoption of ISO 50001 through a reward scheme for industries. The project further aims to promote more pilot industries to have ISO 50001 certification and empowering the established Foundation (YEI) to provide excellent services to industries and other clients. In order to sustain the gains of this project there is need to integrate energy efficiency practices as minimum competency standard for significant energy users (boiler, compressor, pump, power plant, etc.) and operators in the industries. There is further need to monitor project impact relating to energy saving and CO2 reduction on a continuing basis.

Recommendations

The ongoing mid-term evaluation³⁸ has made several relevant recommendations which are reflected, among other things, below. The establishment of Yayasan Energy Indonesia (YEI), a foundation designed to institutionalise the peer-to-peer network of energy management and optimization experts and provide services would contribute to sustainability as it would function as a pool of expertise that

³⁵ During project life time, by trained industries

³⁶ saving per year in 2014 from EnMS pilot companies batch 1 (3,5 year before project closing)

³⁷ 10 years, included saving by vendors

³⁸ Mid-term Evaluation Report, "Promoting industrial energy efficiency through system optimization and energy management standards in Indonesia",

beneficiaries (companies, financial institutions, government) can resort to when needed. The project website is expected to be operated through the foundation and would serve as a forum for the participating industries to provide information on experiences and best practices. The evaluation recommends a clearer definition of the exact mandate and function of YEI and a clear articulation of how the foundation would be sustained financially through the preparation of a business plan for the foundation within the context of this project.

Institutionalization of the Peer-to-Peer network, YEI business planning and sustainability of the EnMS and SO training should be part of a sustainability and up-scaling plan to guide the government in the design and implementation of a long-term energy management program in the industry. Apart from stressing the role of YEI, the role of existing industrial associations, chambers of commerce and industry as well as professional associations of engineers could be highlighted. Also, the three Ministries play a continuing role in promoting energy efficiency. Within MEMR, the Energy Efficiency Clearing House Indonesia (EECHI) is developed under cooperation between the Directorate of Energy Conservation and Danish International Development Agency (DANIDA) and can support awareness enhancement on EnMS and SO.

The evaluation further recommends and is reiterated here that UNIDO's vast experience in organizing similar projects on energy management systems (EnMS) and system optimization (SO) suggests the need to institutionalize the training in UNIDO itself through refresher courses in the participating countries. This could be part of a wider effort by UNIDO to continue promoting EnMS and SO services to countries.

8. Development of Nias Renewable Energy through Installation of Micro Hydro Power Plant

Project background

This project pre-dates the current country Programme and had been evaluated in 2009 as a part of the UNIDO Country Framework of 2005-2007. Initially funded by UNIDO and OCHA for USD 311,000, the project received additional funding from the local government Bureau for Rehabilitation and Reconstruction for Aceh and Nias in the amount of USD 119,000.

The project was designed to "supply the rural community in Nias with environmentally sound affordable and adequate electricity which would expectedly increase employment opportunities, improve the ecological environment, reduce poverty, improve livelihoods and stimulate economic development activities in the targeted areas". A second specific objective was to "establish a Community Development Centre with a view of facilitating growth of micro-industry, sustainable agriculture, health care, education, information and

communication facilities and the use of electricity to bring efficiency into all possible aspects of rural life and serve as a demonstration project for duplication in similar conditions in other areas”.

Relevance

At the time of the previous evaluations in 2008 and 2010³⁹ provision of electricity from a small hydropower plant was seen as a highly relevant intervention in Nias following a natural disaster and because small hydropower was deemed as particularly suitable for mountainous regions. The need for improved access to electrical energy resources was recognized by the local government and the Agency for Rehabilitation and reconstruction following the devastating earthquake that hit the island in 2005. The evaluation noted that between May and September 2005 the project objective had changed from installing a small hydropower facility to provide energy for productive uses to the development of an environmentally sound and adequate power generating facility for a Community Development Centre and other unspecified uses. The evaluation was categorical in noting that a needs assessment had not been done prior to the establishment of the ICT-based Community Development Centre even if, in principle, it may have looked like a useful community development activity particularly in a remote area, therefore the relevance and financial viability of the initiative was questionable. The project document failed to justify the ICT community Development Center but articulated its impacts and replication effects to other communities.

The relevance of the project was deemed mixed. On the positive side, the objective of the project to provide electricity to the community from a small hydropower plant would meet the needs of the community, is well supported by the local authorities and falls within the competence of UNIDO and could have supported productive uses. However, the evaluation could not discern clearly what the ICT would contribute to sustainable livelihoods especially when no specific needs nor targets groups had been identified. There was no strategic links between the SHP power generation and the Community Development Centres. Indeed, the Centres met their power needs from other sources.

Efficiency

The project was planned for the duration of 12 months. Three years after project start-up the project had not been fully completed its activities, granted an additional Community Development Centre had been added to the activities. The

³⁹ Source: Independent Evaluation. Indonesia Country Services Framework (Phase II – 2005-2007, UNIDO, Vienna. 2009; Independent Thematic Evaluation Review, UNIDO Projects for the Promotion of Small Hydropower for Productive Use, UNIDO, Vienna 2010.

original budget was USD 311,000. At the time of the evaluation in 2009 a total of USD 540,000 dollars had been spent.⁴⁰ This represented an increase of over 70% of the original project budget with only an addition of a second community Development Centre. As a result of the late emphasis of the project on the ICT Community Development Centre with resources being expended on their construction, computers and satellites to connect the Centres to the internet, the original funds were exhausted necessitating the mobilization of additional resources from local government and UNIDO to finance the installation of the Small Hydro Power unit. The result was delay in project implementation.

The increased project costs coupled with high transaction costs to UNIDO stemmed from the fact that the project, located in a remote area of Indonesia, was essentially managed from UNIDO Headquarters. The administrative processes associated with money transfers between Vienna and Jakarta and then to the project office in North Sumatra made project implementation inefficient.

Effectiveness and Performance

The two key outputs (the installation of a small hydropower unit and its distribution system and 2 Community Development Centres equipped with computers and satellite connection to the internet) planned had been achieved at project completion. According to the 2009 evaluation report, the local government and BRR were generally happy with the newly installed hydropower unit which is expected to produce the projected power output without difficulty.

Yet, even now the project has not produced its long-term result of providing adequate electrical power for the Island and to promote the growth in micro-industries consistent with the mandate of UNIDO. At the time of the field visit for the Independent Thematic Review of UNIDO Projects for the Promotion of Small Hydropower for Productive Use, the plant was not operational and each of the 200 individual households had installed their own load management system which, all taken together, had exceeded the installed 40 MW capacity resulting system failure each time it was turned on. Indeed, the evaluation found that even though members of the community had been invited to attend a number of meetings regarding the SHP project, the community had not been effectively consulted during project implementation. An existing local committee which was given the responsibility to operate the plant was not trusted by the community. Critical issues relating to how much electrical power to allow individual households and for what uses as well as enforcement, resources to run and maintain the plant and the entire distributions system as well as tariffs had not been resolved. In sum, while installed capacity of 40MW of power with its

⁴⁰ Source: Independent Evaluation. Indonesia Country Services Framework (Phase II – 2005-2007, UNIDO, Vienna. 2009

distribution system exists, the required leadership and community ownership to manage the system effectively is not in place.

Following some computer training at the two Community Development Centres the ICT equipment were abandoned. There are no records to demonstrate the outcome of the computer training activities. Neither was there any link between the the Community Development Centres.

Sustainability/Impact

There was considerable uncertainty about the Nias project at the time of the two evaluations referenced above. As noted, the small hydropower plant was not operational; the distribution system was in a state of disrepair. There was no trusted local authority responsible for efficient management of the facility. No maintenance budgets were planned and the tariff system was non-existent. While community participation for the management of the Small Hydropower System had been planned at project design as a measure of project sustainability, no budgets had been allocated for managing the system; therefore no sense of community ownership was evident.

The evaluation further noted that use of the ICT equipment in the Community Development Centers had been discontinued and there did not seem to be any reasonable expectation that they would be used in the future. Internet connection to the satellite system was expensive for the local community and this should have been considered as a possible risk to project sustainability.

The Independent Thematic Review of UNIDO Projects for the Promotion of Small Hydropower for Productive Use was quite optimistic however, that resources could be mobilized from both UNIDO and the Agency for Rehabilitation and Reconstruction for Aceh (BRR) and Nias to cover remedial actions that would correct the unfortunate state of affairs and reengage the community. The evaluation further argued that substantial impact could be achieved if the pilot small hydropower plant were to be replication into series of stand-alone grid connected power plants in Nias and Aceh by BRR with focus on productive use.

2.2 Poverty reduction through productive activities

9. TF/INS/08/004, TF/INS/08/A04 and US/INS/10/002: Realizing minimum living standards for disadvantaged communities through peace building and village based economic development

Project background

Following ethnic conflict in Maluku Province, the Maluku Pelagandong project, as

it has been called locally, was designed to assist the provincial government to contribute to poverty reduction and the peace building process in Maluku Province.

The project was funded through a USD 2.1m grant provided by the Government of Japan (GOJ) under the United Nations Trust Fund for Human Security (UNTFHS). The three-year project signed and approved in February 2009 was jointly implemented by UNIDO as the lead agency and ILO as a cooperating agency, in partnership with the Maluku Provincial Government (MPG) and the Ministry of Industry (MOI) and the Ministry of Manpower and Transmigration (MOMT). The financial allocation for UNIDO was USD 1,335,950; the ILO budget was USD 771,557.

From November 2010 to February 2012, the New Zealand Fund provided additional support to the project with USD 42,465 (US/INS/10/002). The funding went towards objective 2.1 (VPGs achieve higher value-added by applying technology and crafts skills) and was specifically for training in the seaweed sector.

The overall goal of the project was to assist the MPG in addressing the complex and multifaceted problems related to the building of a stable peace situation in the aftermath of ethnic conflict in three selected districts of Maluku province; Ambon city, Central Maluku and West Seram. Intended outcomes of the project were to develop peace building through creating productive economic activities leading to a reduction of poverty and social and economic inequality. Direct beneficiaries included around 3,000 beneficiaries from 21 villages selected among conflicted affected populations, internally displaced persons (IDPs) and their host communities.

The project consisted of four components, implemented respectively by UNIDO, ILO or jointly by both organisations:

- Component 1: Village organization and empowerment (UNIDO and ILO);
- Component 2: Sustainable Livelihood development through education and technology transfer (UNIDO and ILO);
- Component 3: Peace building and conflict management (ILO);
- Component 4: Overall living and occupational safety and health conditions (UNIDO and ILO).

In the long run, the project aimed to contribute to the achievement of MDG 1 (poverty alleviation), MDG 3 (gender equality and women empowerment), and MDG 8 (partnership for development).

An **independent final evaluation** of the project was conducted in 2012/13. In the following, the main findings or the independent final evaluation are presented in brief.

Relevance

The evaluation found that the Maluku Pelagandong project was both relevant to and in line with UNIDO's overall thematic priorities and the 2009—2013 UNIDO country programme focus on sustainable livelihood and productive capacity for poverty reduction. The project was also relevant with its dual focus on the development of the local economy coupled with a promotion of peace building activities. The project was in line with the Government policies at the time of its formulation and aligned to the 2003—2008 provincial development strategic plan for small and medium enterprise in the agro-commodities sectors for Maluku.

The project was relevant to the selected target groups affected by the conflict in Maluku providing improved entrepreneurial skills and enhancing productive capacities and income generation through technology transfer. The project also scored high in terms of having undertaken a poverty mapping and situation analysis in the preparatory phase.

The community based development approach and the extensive participatory consultation on beneficiary selection has increased the beneficiaries' ownership of the project. The project was active in 21 villages in Ambon city, West Seram and Central Maluku Districts.

Efficiency

The evaluation rated the efficiency of the project as only fair. The project management set up was rather complex with offices in three separate locations, in Vienna (UNIDO), Jakarta (UNIDO and ILO) as well as Ambon (UNIDO and ILO). Frequent changes in project staff and the delay in recruitment of new staff also affected the efficiency of project implementation.

In addition, the wide geographical area of the project and the large range of value chains selected further reduced efficiency.

The project underperformed regarding Village Productivity Groups (VPG) with 206 being active, not the target of 240. Total active beneficiaries were reported as 2,125 and not the target of 3,600. 3,041 persons were trained in the production of different value added products. This included training equipment, as well as USD 246,000 for agricultural and basic food processing equipment for the VPGs.

Effectiveness and performance

Considering the project was multi-sectoral, working in a range of geographical locations and beneficiary groups and implemented across a broad range of LED,

peace building, agricultural and agro-processing requirements, delivery of outputs was rated as effective.

Developing Village Productivity Groups (VPGs) lay at the core of the project. This was in terms of generating additional income for vulnerable beneficiaries, engendering peace, and as recipients of training for the projects four components.

Training has been provided to VPGs that focused on value added products. The range of products was very large and included nutmeg juice, pineapple juice, cassava chips, banana chips, spinach chips, sago cakes and cookies, sugar and organic vegetable production, the collection of seaweed, the cultivation of copra, cacao, wet sago, vegetable, resin, cajuput oil and virgin coconut oil.

Results, in terms of number of beneficiaries including village productivity groups had been below targets with respect to village groups. Women participation of about 65% was achieved within the target groups. However, the people, who participated in the project, had successfully gained the know-how of agro based processing and product development. As a whole, it can be assumed that the project contributed to social cohesion and no further internal conflicts were reported since the completion of the project.

During project implementation, incomes were reported to have increased for all beneficiaries in all products and across all villages. However, some of the value chains proved to be economically unviable and activities stopped at the end of the project.

Sustainability and impact

The project has had a positive impact with a reported increase by about half of beneficiaries' incomes. Additional income was also being used to access essential social services, particularly education.

In the short term, the project has had a positive impact through the provision of technical training to geographically disperse rural individuals and their communities and the empowering of community based VPGs. The main obstacles reported by the beneficiaries were selection of value chains, market access, the quality of packaging, the price of raw materials and the low prices received for products sold.

However, overall sustainability and long-term impact was rated as low. No signs were found of copycatting, upscaling, dissemination of the model of interventions or that trainers/coaches were continuing to provide services to entrepreneur/small businesses.

The focus of basic skills training for the largest possible number of beneficiaries in a broad range of products over a wide geographical location also meant it was difficult to maximise value addition for any particular product. At the same time individuals have been benefitting from the project and improved their income levels but this has not been at the scale allowing for local economic development, or more general poverty reduction or conflict prevention.

While the project did produce certain positive results on the ground, the question to be asked is of the actual impact since the completion and the handover of the project to the national stakeholders. Post-project sustainability issues were not clearly defined during project design. At the time of handover of the project, these issues did come to the knowledge of both UNIDO and the local government. Among the steps identified was that the local government would provide a working capital fund to the village target groups for which provincial budgetary allocations were to be made. As no field-visit based information has been made available after the 2012 evaluation, the extent of the realisation of these plans is not known.

2.3 Trade capacity building

10. XP/INS/08/002, SAP 120110: Increasing trade capacity of selected value chains within the fisheries sector in Indonesia

Project background

The fisheries programme – operating under the name SMART-Fish Indonesia- is an innovative trade-related technical assistance programme that was developed by UNIDO and is financed by the Swiss State Secretariat for Economic Affairs (SECO).

The sustainable use of maritime resources has long been on the agenda of development partners, but gained increased prominence in the trade-based community with the surge of sustainability standards as “de facto” market access barriers. Against this backdrop, UNIDO received the joint request of three Indonesian Ministries namely the Ministry of Marine Affairs and Fisheries (MMAF), the Ministry of Trade (MoT) and the Ministry of Industry (MoI) to develop a trade-related technical assistance programme for the Indonesian fisheries sector.

SMART-Fish Indonesia was designed around six major technical components for a total volume of USD 4.5 m and duration of five years. It started with an inception phase in February 2012; the actual implementation phase will last until May 2018.

The project has selected three value chains where impact potential was considered highest, namely (i) pole and line tuna, (ii) seaweed and (iii) pangasius. Next to its activities in the centre, it will set-up pilot operations in five selected provinces of the country.

The programme design encompasses the following six components:

Component 1: Institutionalizing roundtable dialogues to identify key challenges for exports and supporting the national stakeholders in drafting a related fisheries export strategy and action plan.

Component 2: Strengthen local business support services for exporting SMEs through the Valcapfish Center at the Jakarta University of Fisheries (STP), in order to improve product quality, compliance with mandatory and voluntary standards, productivity and value addition to exports.

Component 3: Developing an educational programme in productivity and innovation for fisheries with the Jakarta University of Fisheries.

Component 4: Support to the establishment of pilot traceability systems in the selected value chains.

Component 5: Support to pilot certification of sustainability schemes towards MSC as well as Global G.A.P.

Component 6: Improved promotion of Indonesian fish exports from the three value chains to key markets.

Progress to date

Programme implementation has started following the approval of the inception report by the Steering Committee in November 2014, which included the updated logframe, budget and annual work plan for 2015.

The programme partners have been pre-identified through a call of interest to ensure a demand-driven selection process. However, formal partnership agreements are still pending due to legal complications with the initially favoured MoUs.

The selection of the University of Fisheries as the main institutional hub has been a good choice and strategic for further transfer and dissemination of technical knowledge and know-how to the industrial fishery sector in order to remove supply side constraints and to improve productivity levels across the fishery chain.

Under component 1 the first roundtable in the form of a national dialogue for tuna was held in Bogor in May 2015. For component 2, an in-depth assessment and discussion was held at the Valcapfish Center to develop the service scope identify the needed capacity-building. In addition, a legal study was conducted to analyse the possibilities for the legal status change of Valcapfish according to the signed roadmap. Under component 3, the University of Tasmania (UTas), Australia was engaged to re-assess the existing undergraduate curricula and develop an action plan on the way forward. In component 4, the pilot traceability systems will be kicked-off in Q3/2015. The inclusion of the Indonesian aquaculture standard, IndoGAP into the pilot-testing programme of the Global Sustainable Seafood Initiative (GSSI) was achieved – a milestone for the programme, as the Indonesian scheme is assessed in a non-competitive manner. Finally, a gender analysis has been completed and will form the basis for future activities.

The latest progress report from May 2015 lists the following main issues that will have to be addressed by the programme:

- A general requirement to speed up implementation by adopting a parallel approach rather than sequential implementation of different components. This should now be possible as the Programme Support Unit (PSU), hosted by STP, has been set-up and is operational.
- An important issue is the clarification of the legal status of Valcapfish and its ability to work independently and in particular to generate its own income from service supply. Should this not be possible, UNIDO and the donor have agreed that an exit strategy will be developed to avoid unsustainable spending of programme resources within this component.
- The low export capacity of the pangasius sector may become a sustainability risk for the programme. There are very few farmers and processors in the pangasius sector in the selected pilot locations pursuing an export strategy, as they find it hard to compete with Viet Nam. The business case for supporting the pangasius value chain will have to be validated to decide if the programme should continue to support this value chain.

An important element of the success of the project will depend on the institutional arrangement both for implementation and monitoring involving all national partners and the consequential link of matching the demands of conformity for product development and processing and at the same time the project's ability to remove supply side constraints of the sector thus enabling effective removal of supply side barriers to facilitate enhanced trade and market penetration.

3. Conclusions

3.1 Environment and energy

Our analyses show that all the projects in this portfolio are relevant to UNIDO's mandate to promote and accelerate inclusive and sustainable industrial development in developing countries and economies in transition with particular reference to environmentally sound industrial production with the aim of reducing environmental degradation.

Many of the projects particularly those within the environment portfolio were designed to help Indonesia meet its obligations under international treaties such as the Stockholm Convention, the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedures for Certain Hazardous Chemical and thus, will contribute to global efforts to control toxic chemicals in general and to eliminate PCBs in particular. The projects also contribute to the elimination of ozone depleting substances under the Montreal Protocol.

These environment and renewable/energy efficiency projects are consistent with the relevant GEF focal area strategies in which UNIDO maintains strong comparative advantage in providing technical assistance. UNIDO projects create fundamental capacities within governments and among project beneficiaries; they enhance the regulatory and legislative infrastructure and strengthen institutions at national and local levels.

The exception to positive strategic relevance of the projects in this portfolio is the Nias hydropower project in which relevance was deemed mixed. On the positive side, the objective of the project to provide electricity to the community from a small hydropower plant would meet the needs of the community, is well supported by the local authorities and falls within the competence of UNIDO and could have supported productive uses. However, the evaluation could not discern clearly what the ICT centres would contribute to sustainable livelihoods especially when no specific needs nor target groups had been identified. There was no strategic links between the SHP power generation and the Community Development Centres.

In general, the bulk of the projects in this portfolio experienced delays in project implementation. The delays have been the result of several factors, key among which are the long processes for project approval and registration in the relevant government ministries, delays in transfer of fund resources from donors, poor

communication between UNIDO and government ministries and, in one case, UNIDO's inability to recruit a competent Chief Technical Advisor in spite of several attempts to do so. Other reasons include technical competence and lack of understanding of particularly difficult sampling protocols, reluctance by some companies to release information and the inability of the projects, in a specific case, to secure international suppliers for the technology and equipment required for project implementation to proceed.

In one project, UNIDO had anticipated the delay in project registration in the government Ministry and was proactive in initiating the bidding processes and documentation for the purchase of project equipment which, to some extent, ameliorated the effects of the delay.

The verdict on the effectiveness of project implementation is mixed. The majority of the projects in the portfolio have implemented their activities and in some cases exceeded their performance expectations based on what had been planned in the project documents and useable project outputs have been produced. In projects such as the "National Network for Implementation of Resource Efficient and Cleaner Production in Indonesia" and the "Environmentally Sound Management and Disposal of PCB Waste and PCB Contaminated Equipment in Indonesia" however, as a result of delays, not much has been produced in the way of outputs relative to what should have been expected at this stage of project implementation. Substantial work has been done in the area of capacity building and technology support, regulatory and policy reform, institutional reform, regional cooperation and collaboration with universities and academic institutions to prepare guidelines and curricula. At the regional level, energy outlooks and guidance documents have been drafted and training materials on the environmentally sound management of chemicals from industrial processes e.g. boilers have been prepared.

The projects have produced many outputs that provide a measure of sustainability. For example the development of policy frameworks, the drafting and promulgation of laws, standards and guidelines as well as experiences shared will go a long way to ensure some measure of sustainability of regional forum activities in the participating countries. Sustainability is also assured through the involvement of PCB equipment owners and private companies providing services for the collection, transport, interim storage and final disposal under the control of responsible governmental institutions within the framework of the relevant legislation. Current updated government regulations on ozone depleting substances would ensure the phase out of HCFC141b. The project provides a clear example that effective public-private partnerships have the potential to help phase out ozone depleting substances

In the energy efficiency project, an accreditation scheme for ISO 50001 was issued in 2014 and the Indonesia Energy Foundation (YEI) has been established

as EnMS, SO and EE expert pool and service centre. Discussions have been held with government partners to help institutionalize and promote the adoption of ISO 50001 through a reward scheme for industries. The project further aims to promote more pilot industries to have ISO 50001 certification and empowering the established Foundation (YEI) to provide excellent services to industries and other clients. These schemes provide means of sustainability following the disengagement of the project. To further sustain the gains of the project there is need to integrate energy efficiency practices as minimum competency standard for significant energy users (boiler, compressor, pump, power plant, etc.) and operators in the industries.

3.2 Poverty reduction through productive activities

The 2012 independent final evaluation found the project to have been too ambitious, considering the budget, duration and local context. There had been a good level of local partners during implementation but limited attention to capacity building, dissemination of best practices or upscaling.

The project had been at too small a scale and dispersed in too many different production/value addition activities of which only few were economically viable and produced results in terms of local economic development.

3.3 Trade capacity building

The SMART-Fish programme is now well underway; initial delays could be addressed. A core challenge is its complexity, as it has many partner organisations both a central level as well as in the pilot provinces.

Core issues being addressed at the moment are (i) the legal status of the Valcapfish Centre at the Jakarta University of Fisheries, as well as (ii) concerns about the international competitiveness of the Indonesian pangasius sector.

4. Recommendations

4.1 General

1. A new Country Programme should be developed based on national needs and priorities but also reflecting the Inclusive and Sustainable Industrial Development (ISID) mandate of UNIDO and the forthcoming Sustainable Development Goals (SDGs), including:
 - a. A deeper integration and collaboration with counterpart ministries, for instance through seeking alignment with Government plans, strategies and budgets. The expected roles, benefits and contributions of counterpart agencies need to come out clearly and be defined in project documents, cooperation agreements or MOUs
 - b. Project documents should be clearer on expected results and on expected roles, contributions and benefits for local stakeholders
 - c. Projects should mainstreaming gender and give attention to gender already during design and inception phases
2. The FO should strengthen its role in country level coordination, reporting, monitoring and follow-up.

4.2 Environment and energy

3. This evaluation believes that expeditious action from UNIDO to appoint a Chief Technical Advisor for the project on "National Network for Implementation of Resource Efficient and Cleaner Production in Indonesia" will help put the project back on courses and assuage the fears and frustration of the key stakeholders. In the meantime, activities that could be implemented by CRECPI in the absence of the CTA should be funded to allow the centre to continue to be functional and develop the momentum for when the CTA assumes his/her responsibilities.
4. It is recommended that Governments develop new policies and enforce existing guidelines. The policies issued may then be used as the basis/guidance for industry to implement Best Available Techniques and adopt Best Environmental Practices. In addition it is recommended that ambient air quality standards on persistent organic pollutants be established.
 - a. MOE should expedite its internal processes for the submission of the NIP to the COP in order to benefit further from additional potential resources for the implementation of POPs projects.
 - b. PCBs and U-POPs should be focus for POP's work. Sampling capacity for PCBs and U-POPs should be enhanced and analytical capacity developed if not in Indonesia then in the region.

5. In some countries regulations on dioxins are in place but analytical and technical capacities are still insufficient. The project through the training conducted on dioxin analysis and laboratory establishment has contributed to the enforcement of the laws. It is, therefore, recommended that future projects foresee the establishment of certified laboratories, the delivery of appropriate equipment and trained technicians for conducting the sampling and the analysis.
6. This evaluation believes that lack of adequate communication between UNIDO and the project stakeholders accounted for the misunderstandings with MOE and the subsequent loss of the opportunity to work on the next phase of this project. There seems to be a need for improved communication between UNIDO and government partners and delegated authority to UNIDO Representative to make the processes of project implementation more efficient.
7. Networks created as result of these projects need to be maintained and reinforced. Information exchange with other companies (national and international) is very important for creating awareness and improved process efficiency.

4.3 Poverty reduction through productive activities

8. Any similar project/programme should pay more attention during the design phase to apply a full-fledged logical framework approach, including inter alia, stakeholder analysis, problem analysis, and realistic project objective identification together with relevant and measurable performance indicators.
9. A more extensive analysis of market potential of products and raw materials access should be conducted with a narrower range of products. This would enhance the potential for greater value addition and marketing of products.

4.4 Trade capacity building

10. The SMART-Fish programme should continue its endeavour to solve the legal status of the Valcapfish Centre at the Jakarta University of Fisheries. If this cannot be achieved within reasonable time, an exit strategy must be developed to avoid unsustainable spending of programme resources within this component.
11. The export capacity and potential of the Indonesian pangasius sector must be validated in order to decide if the programme will continue to support this value chain.

5. Lessons learned

1. Future follow-up projects derived from the experience of regional projects should stress the importance of the training and of the study tours. They have been viewed as very useful and have consequently encouraged companies to pay attention to the environmental quality and the proper management of emissions.
2. Small hydropower projects can provide an efficient means of providing power in remote regions. Future SHP projects should ensure community involvement not only in the planning and decision making processes but also in the construction of the facility. Processes should be put in place to manage the facility and decide on the formula for sharing power and determine rates.
3. Future UNIDO implemented Small hydropower projects should endeavour to establish strong linkages between power generation and productive use consistent with the mandate of the organization.
4. In a complex peace-building context like Maluku, UNIDO's and ILO's joint focus on income generation and equitable development across religious, ethnic and administrative boundaries contributed to conflict reduction as the generation of income and trading has the potential to transcend community divisions. Detailed peace and conflict analysis would, however, better enable identification of the root cause of crisis, together with their most sustainable post-crisis response.
5. A well-coordinated monitoring mechanism involving all development partners should be established. It will enable an efficient and effective project implementation to obtain desired results, and facilitation of practical and useful feedback for future country programming exercises. All projects implementation strategy should include institutional steering committee mechanism for monitoring and reporting involving all partners to ensure appropriate follow-ups.
6. Exit Strategy: All project designs should consider an appropriate exit strategy given that village based vulnerable groups were the target beneficiary; and easily exposed to many external factors-that adequate measures are built into maintain the project's sustainability. The lesson would be an appropriate analysis of risk factors built in during the project design.

Annex A: Terms of reference

Terms of reference for the Independent Country Evaluation in Indonesia

1. Introduction and background

An independent evaluation of the activities and involvement of the United Nations Industrial Development Organization's (UNIDO) in the Republic of Indonesia was proposed and included in the UNIDO Office for Independent Evaluation (ODG/EVA) Work Programme 2014/2015.

The country evaluation will assess the efficiency, effectiveness, impact and sustainability of the UNIDO interventions in Indonesia implemented since 2008 until now (2014). In addition to assessing country programme instruments, the country evaluation will include an assessment of the Field Office and how various management functions/tools contribute to efficient implementation, and achievements of regional programme interventions and national stand-alone projects as well as Montreal Protocol (MP) and Global Environment Facility (GEF) projects. The country evaluation is planned for the first quarter of 2015 and will be conducted by ODG/EVA staff and external independent evaluators.

Country context

Indonesia has a population of 242 million and with a total area covering 1,919,440 sq. km. Indonesia is the world's largest archipelago, with more than 17,500 islands, the world's fourth most populous democracy (since 1999) (behind China, India, and the United States).

The Human Development Index (HDI) for Indonesia was 0.68 in 2013, positioning the country in the medium human development category, at the 108th place out of 187 countries.⁴¹ The unemployment rate was estimated at 6.6% in 2012⁴², showing a decreasing tendency and the poverty rate was estimated 16.2% in 2011⁴³ also showing improvement from 2010 (the poverty rate was 18% in 2010). Indonesia is ranked 38 on a total of 148 countries on the Global Competitiveness Index (GCI)⁴⁴ for 2013 -2014 ranking higher than in 2012 -2013 (ranked 50) and has a Gender Inequality Index of 0.494,

⁴¹ United Nations Development Programme.(20 October 2014) Retrieved from: <http://hdr.undp.org/en/content/table-2-human-development-index-trends-1980-2013>

⁴² World Bank Organization. (20 October 2014). Retrieved from: <http://data.worldbank.org/indicator/SL.UEM.TOTL.ZS>

⁴³ World Bank Organization. (20 October 2014). Retrieved from: <http://povertydata.worldbank.org/poverty/country/IDN>

⁴⁴ World Economic Forum. The Global Competitiveness Report 2013–2014.Retrieved (1.December 2014) http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf

ranking 106 out of 148 countries in the 2012 index⁴⁵, worse than other Asian countries like Philippines and China which are ranked at 77 and 35 respectively on this index.

Economic aspects

Indonesia is the 16th largest economy in the world and the biggest economy in the Association of Southeast Asian Nations (ASEAN) and presented a steady economic growth over the last six years. As reported by Statistics Indonesia, the GDP Annual Growth Rate in Indonesia averaged 5.42% from 2000 until 2014, reaching an all-time high of 7.16% in the fourth quarter of 2004 and a record low of 1.56 % in the fourth quarter of 2001. Foreign Direct investment (FDI) represents only 2,1% of the GDP⁴⁶. In 2012, Indonesia had a slight trade balance of USDUSD 4.076,9 million, exporting USDUS182.551,8 million and importing USDUS 186.628,7 million⁴⁷.

According to 2000-2014 data, the services sector constitutes 38% of total GDP. Within services, the most important are: trade, hotel and restaurants (around 14% of GDP); transport and communication (7% of GDP); finance, real estate and business services (7% of GDP) and government services (6%). Agriculture accounts for the remaining 15%.⁴⁸

The industrial sector is the sector that currently contributes most to Indonesia's annual GDP growth. The two most important sub-sectors of industry are mining and manufacturing, both being major pillars of the nation's economy since the 1970s, thus being engines of economic change and development. Although manufacturing has lost its momentum after the Asian Crisis of the late 1990s, it still constitutes the most popular sub-sector of Indonesia in terms of foreign direct investment (FDI), followed by the mining sub-sector. Indonesia's main mining and manufacturing products are: coal, oil, gold, automobiles, electronics, footwear, textile products, paper products, furniture.⁴⁹

As far as energy is concerned, Indonesia produces oil, coal, natural and has a high renewable energy potential (solar, wind, hydro and geothermal energy). According to the International Energy Agency (IEA) Indonesia was the 10th top natural gas producer in 2009. Indonesia is also blessed with huge renewable energy sources: Hydro, Geothermal, Mini/Micro-hydro and biomass. In addition solar energy and probably ocean/wave energy are available.

⁴⁵ UNDP. Human Development Report. (20 October 2014). Retrieved from: <http://hdr.undp.org/sites/default/files/Country-Profiles/IDN.pdf>

⁴⁶ The World Bank: <http://data.worldbank.org/indicator/BX.KLT.DINV.WD.GD.ZS> (Retrieved 23.10.2014)

⁴⁷ Total Balance of Trade in Indonesia: <http://www.kemendag.go.id/en/economic-profile/indonesia-export-import/indonesia-trade-balance> (Retrieved 23.10.2014)

⁴⁸ Trading Economics: <http://www.tradingeconomics.com/indonesia/gdp-growth-annual> (Retrieved 28.10.2014)

⁴⁹ Indonesia investments <http://www.indonesia-investments.com/culture/economy/general-economic-outline/industry/item379> (Retrieved 01.12.2014)

Challenges

Indonesia is a middle income country with manufacturing activities driven largely by the private sector and having a moderately sound export base. However, the manufacturing base needs to be modernized and industry and trade competitiveness needs to be strengthened.

With more than 25 large cities, with increasing urbanization and with some top ranked cities when it comes to population density, Indonesia faces some big challenges in the environment and infrastructure sectors. The greater metropolitan area of Jakarta has a population of about 27 million today and being one of the fastest-growing cities on earth, growing faster than Beijing and Bangkok, is expected to grow to over 40 million by 2050⁵⁰.

Pollution and the growing pressure of population demands together with inadequate environmental management is a problem for Indonesia that hurts the poor and the economy. Promoting employment and protecting the country's vast natural resources from natural and man-made disasters is another major issue.

The Government became a signatory of the Stockholm Convention on Persistent Organic Pollutant (POPs) in 2001. Today, Indonesia is one of the largest recipients of climate related development assistance through international funds, including the *Global Environment Facility (GEF)*⁵¹.

Government priorities

Giving high priority to nationwide economic and social development, the Government of Indonesia set a number of ambitious objectives that should be reached by the year 2025 and, accordingly, launched development plans listing its national development priorities. According to the "National Long Term Development Plan 2005 – 2025" the government's priorities are:

1. Competitive economic development
2. Competitive manufacturing industry
3. Industrial sector as the locomotive of economic development
4. Development of industrial clusters
5. Improvement of efficiency, modernization and added value
6. Poverty alleviation
7. Trade and investment
8. Energy development
9. Environmental protection

⁵⁰ New cities foundation . <http://www.newcitiesfoundation.org/wp-content/uploads/2014/11/PDF-PR-Jakarta-to-host-New-Cities-Summit-2015-EN.pdf> (Retrieved 01.12.2014)

The effectiveness of climate finance: a review of the Indonesia Climate Change Trust Fund ⁵¹
<http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/8898.pdf>. (Retrieved 01.12.2014)

The above priorities form the basis for Ministries and Government agencies when formulating or adjusting their respective strategic and regional plans. In brief, Indonesia aims to earn its place as one of the world's developed countries by 2025 to be achieved by efforts aimed at increasing the quality of human resources, including the promotion of capacity building in science and technology and the strengthening of economic competitiveness.

United Nations Development Assistance Framework (UNDAF)

UNDAF 2006 - 2010⁵²

The UNDAF 2006-2010 provided a collective, coherent and integrated United Nations System response to Indonesia's national priorities and needs and was also in line with the commitments, goals and targets of the major international conferences, summits, conventions and human rights instruments of the UN system.

The focus areas and main outcomes of the UN System in Indonesia for UNDAF 2006-2010 were agreed to be:

- *Strengthening human development to achieve the MDGs*
- *Promoting good governance*
- *Protecting the vulnerable and reducing vulnerabilities*

UNIDOs work in Indonesia - as part of an interagency collaboration with International Labor Organization (ILO), United Nations Volunteers (UNV) and United Nations Treaty Collection (UNTC) - is in particular linked to the first and the third focus area of UNDAF 2006-2010.

UNPDF 2011- 2015

The United Nations Partnership for Development Framework UNPDF 2011 – 2015 was formulated over a period of two years in close coordination with the National Development Planning Agency (BAPPENAS) as the national Counterpart and with the engagement of several UN agencies, the Government, and civil society. The following 'actual' thematic focus areas for the UNPDF were identified:

1. Poverty and Vulnerability
2. Human and Social Impact of Crisis
3. Climate Change / Energy / Environment
4. HIV / Aids
5. Disaster Risk Reduction and Disaster Management
6. Participation and Decentralization

⁵² UNDAF: United Nations Development Assistance Framework. Indonesia 2006-2010

It can be seen that the projects identified (and funded) under the Country Programme 2009 – 2013 had a direct link and were fully relevant to the identified thematic focus areas 1, 2 and 3 of the UNPAF 2011-2015.

UNIDO's presence in Indonesia

UNIDO has implemented more than 303 projects in Indonesia since 1969 with a total budget of more than USD 77 million⁵³.

Country Services Framework (CSF) Phase I 2003 – 2004 and Phase II 2005-2007

In the period 2003-2007 UNIDO's activities in Indonesia were organised under two consecutive Country Service Frameworks (CSF). UNIDO's Country Service Framework CSF I and CSF II covered the periods 2003 – 2004 and 2005 – 2007, respectively. Both the CSF I and II were not fully funded due largely to the aftermath of the Asian Financial Crisis of the late-1990s and the devastating tsunami and earthquake, which hit the country in 2004. During the CSF I and CSF II Indonesia were mostly engaged in structural adjustment programmes, and the top priority during CSF II was relief and humanitarian assistance to the victims of natural calamities.

CSF II comprised 14 programmatic themes structured under three components and had a budget of more than USD10 million. The CSF II was not very successful in raising funds. As a result of the funds mobilization efforts from both external and UNIDO sources, eight projects were ultimately funded and implemented under the Framework, with a total budget of USD3.2 million. This funding level accounted for 30% of the original budget.

An independent evaluation of CSF II (May 2008) concluded that, although the framework and actual interventions proposed and implemented were broadly relevant, the overall effectiveness of the CSFII was limited and the efficiency mixed. Five of the projects covered different geographical areas, had different target groups, were not related types of project and were managed by different project managers, therefore there was a minimal synergy effect. At least three projects were designed as pilots, but replication features had not been built into the design and implementation and as a result, they were not readily replicable.

However, some significant outcomes were also produced. A comprehensive National Implementation Plan for the phase out of POPs in Indonesia had been endorsed by the government of Indonesia which was a key step for the government towards ratifying the Stockholm Convention. The livelihoods of the targeted beneficiaries, even though small in number, had increased and had become more stable. A technically sound small hydro power plant, which was put in place in Nias Island, would produce long-term impact if the local authorities or other development organizations replicate its model.

It was recommended, among others, that the upcoming UNIDO Indonesia Country Programme should follow up on and replicate the successful interventions under CSF II

⁵³ Source: UNIDO InfoBase, November 2014

and include only projects with genuine government support and firm funding prospects. Moreover, it was recommended to base programme/project design on proper needs assessments.

In May 2009, the discontinuation of the CSF Phase II was decided based on the understanding that whatever activities were still ongoing at that moment, should be included under the next Country Programme⁵⁴.

The 2009-2013 Country Programme (CP)

The Country Programme 2009 to 2013 was prepared with inputs received from Indonesia counterparts, in particular the Ministries of Industry, Trade, Environment, Energy and Mineral Resources. The formulation process took also into account the UNDAF 2006-2010, as well as the likely funding opportunities based on Indonesia's state of economic development. The CP had an initial budget of USD 26,997,631⁵⁵ (including support costs) and is structured along five components, covering 10 projects. The Country Programme was approved on May 2009 by the UNIDO Project Approval Committee (PAC).

Below there is a list with the projects planned in the Country Programme:

1. Programme Component One: Poverty Reduction through Productive Activities.

- Project 1: Realizing minimum living standards for disadvantaged communities through peace building and village based economic development in Maluku province.
- Project 2: Improving Human Development in Belu District, Nusa Tenggara Timur. Province (UN joint programme).

2. Programme Component Two: Trade Capacity Building.

- Project 3: Increasing trade capacity of the fisheries sector in Indonesia.

3. Programme Component Three: Promotion of Renewable Energy and Industrial Energy Efficiency.

- Project 4: Promoting Energy Efficiency in the Industries through System Optimization and Energy Management Standards.
- Project 5: Development of Nias Renewable Energy through Installation of Micro Hydro Power Plant.

4. Programme Component Four: Environment, MP - Stockholm Conventions (POPs).

- Project 6: Introduction of an Environmentally Sound Management and Disposal System for PCBs Wastes and PCB Contaminated Equipment in Indonesia.
- Project 7: Regional Plan for Introduction of BAT/BEP Strategies to Industrial Clusters of Annex C of Article 5 Sectors in East and South East Asia (ESEA)

⁵⁴ IOM, 18.05.2009. Discontinuation of UNIDO Programmes

⁵⁵ Source: Information provided by the FO in Indonesia (21/10/2014)

Region:, Cambodia, China, Indonesia, , Lao, , Mongolia, , The Philippines, Thailand, and Vietnam .

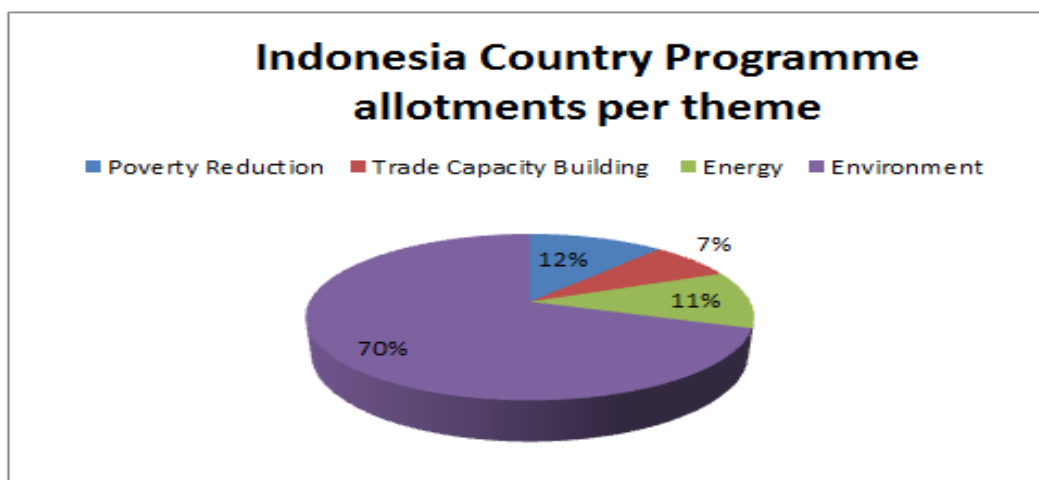
- Project 8: Demonstration of BAT and BEP in Fossil Fuel fired Utility and Industrial Boilers in Response to the Stockholm Convention on POPs.
- Project 9: Phasing-out of HCFC -141b Under MP
- Project 10: National Network for Implementation of Resource Efficient and Cleaner Production in Indonesia.

5. Programme Component Five: Cross Cutting Programme – South - South Cooperation

At this stage, all projects (with exception Project 2: Improving Human Development in Belu District, Nusa Tenggara Timur Province, UN joint programme) of the Country Programme are being implemented or have been completed.

The Country Programme for Indonesia has an overall approved budget of USD 28,153,010 (including support costs) and is thus 104% funded⁵⁶. It is to be noted that the Programme's major project portfolio concerns environment and energy related support with a portfolio of about 18 Million. The biggest donor is the Global Environment Facility (GEF). Other important donors are: the State Secretariat for Economic Affairs (SECO), of the Switzerland Government, the Montreal Protocol Multilateral and the Governments of Japan, Italy and New Zealand.

Figure 1: Indonesia Country Programmed allotments per themeⁱ



A list of the current status of the projects (released budget and expenditures) included in the Indonesia Country Programme is presented below⁵⁷.

⁵⁶ Source: Information provided by the Field Office of Indonesia (21/10/2014)

⁵⁷ Source: Information according to SAP, infobase and PM (21.11.2014)

Current status of budget information and disbursements of projects included in the Indonesia Country Programme

Project number	Thematic Area	Status	Project name	Region of implementation	Budget Info USD / EURO€ Allotment November 2014	Budget Info USD /EURO: Disbursement	Donor
			CP for the Republic of Indonesia 2009 – 2013				
US/INS/10/002	PRP	C	Realizing minimum living standards for disadvantaged communities through peace building and village based economic development	INS	37,681	38,924	United Nations Trust Fund for Hu, Japan
TF/INS/08/004 TF/INS/08/A04	PRP	C	Realizing minimum living standards for disadvantaged communities through peace building and village based economic development	INS	1,966,076	1,978,926	United Nations Trust Fund for Hu Japan
XP/INS/08/002 SAP 120110	TCB	O	Increasing trade capacity of selected value chains within the fisheries sector in Indonesia	INS	4,500,000	437,906	SECO, Switzerland
XP/INS/08/002	TCB	C	Increasing trade capacity of the fisheries sector in Indonesia	INS	123,221	123,221	UNIDO
GF/INS/12/001	Environment	C	Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment in Indonesia - preparatory assistance	INS	150,000	160,726	GEF
SAP 130249	Environment	O	Introduction of an environmentally sound management and disposal system for PCBs wastes and PCB contaminated equipment in Indonesia	INS	6,000,000	233,849.01	GEF
UE/INS/09/004	Environment	C	National network for the implementation of resource efficient and cleaner production in Indonesia - preparatory assistance	Yogyakarta, Bandung, Surabaya, Makassar and Jakarta	54,671	55,910	SECO

Project number	Thematic Area	Status	Project name	Region of implementation	Budget Info USD / EURO€ Allotment November 2014	Budget Info USD /EURO: Disbursement	Donor
US/INS/12/002 (SAP 100224)	Environment	O	National resource efficient and cleaner production programme in Indonesia	INS	3,401,137	200,267	SECO
XP/RAS/11/001	Environment	C	Regional plan for introduction of bat/bep strategies to industrial source categories of Stockholm Convention annex c of article 5 in ESEA region	Regional: Cambodia China Indonesia Lao People's Democratic Republic Mongolia Philippines Thailand, Vietnam	52,034.97	65,666.71	UNIDO
GF/RAS/10/006, XP/RAS/11/001	Environment	C	Regional plan for introduction of BAT/BEP strategies to industrial source categories of Stockholm Convention Annex C of article 5 in ESEA region.	Regional	1,002,034.97	1,014,573.79	GEF, UNIDO,
GF/RAS/10/003, XP/RAS/11/002	Environment	O	Demonstration of BAT and BEP in fossil fuel-fired utilities and industrial boilers in response to the Stockholm Convention on POPs	Regional: Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand	4,000,000	3,274,542	GEF and UNIDO
GF/INS/12/003	Environment	O	Enabling activity to review and update the national implementation plan in Indonesia	INS	225,000	205,051	GEF

Project number	Thematic Area	Status	Project name	Region of implementation	Budget Info USD / EURO€ Allotment November 2014	Budget Info USD /EURO: Disbursement	Donor
UE/INS/09/003	Energy	C	Promoting energy efficiency in the industries through system optimization and energy management standards - Government of Italy contribution for project preparation	INS	EUR 94,500	EUR 92,728.89	GOVER. OF ITALY
GF/INS/09/001	Energy	C	Promoting energy efficiency in the industries through system optimization and energy management standards - GEF contribution for project preparation	INS	80,000	79,515	GEF
XP/INS/08/003	Energy	C	Sustaining the operation of the micro hydro power plant in Nias island, north Sumatra province, Indonesia	Nias Island, North Sumatra	36,416	36,591	UNIDO
			Montreal Protocol				
MP/INS/10/001	MP	C	Preparation for HCFC phase-out investment activities (solvent sector)	INS	9,647	9,647	Montreal Protocol
MP/INS/11/003	MP	O	HCFC phase-out management plan (stage I, phase I) (umbrella project to phase out hcfc-141b from the manufacturing of rigid polyurethane foam at Isotech Jaya Makmur, Airtekindo, Sinar Lentera Kencana and Mayer Jaya)	INS	777,395	732,194	Montreal Protocol

Regional projects

In addition to the Country Programme two regional projects will be included in the evaluation and will be assessed in terms of relevance to Indonesia and how the country has benefitted from them.

These regional projects are

- 1) TF/RAS/09/004/A04. "Regional Network on Pesticide for Asia and the Pacific" and "NEEM, Phase II - Coordination and technical support services provided by the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific Team (RENAP)."

The complete project list of project portfolio for Indonesia is available in Annex A.

Field Office Coordination, operations and management arrangements

The country programme falls under the responsibility of the UNIDO Field Office in Jakarta. The UNIDO Field Office in Indonesia, located in Jakarta and covers also Timor-Leste. It employs a UNIDO Representative and two staff members. The work of the Office is also supported by National and international experts.

2. PURPOSE OF THE COUNTRY EVALUATION

The evaluation was included in the ODG/EVA Work Programme for 2015. It will be a forward-looking exercise and seek to identify good practices and areas for improvement in order to draw lessons to enhance the performance of UNIDO's programme in Indonesia

The country evaluation aims at assessing in a systematic and objective manner the relevance, efficiency, effectiveness (achievement of outputs and outcomes), impact and sustainability of UNIDO's interventions. The evaluation will assess the achievements of the interventions against their key objectives, including ownership issues and re-examination of the relevance of the objectives and the appropriateness of the design. It will identify factors that have facilitated or impeded the achievement of the objectives. Gender equality, procurement procedures, enterprise development and environmental sustainability will be mainstreamed in the evaluation.

The purpose of the evaluation is multifaceted, covering in particular the following features:

- To assess the relevance of UNIDO's interventions in relation to national needs and national and international development priorities;
- To assess the progress of Technical Cooperation (TC) interventions towards the expected outcomes outlined in the country programme (CP) and related project documents;
- To assess the efficiency of UNIDO Technical Cooperation projects under the CP;
- To assess contributions to the achievement of national development and UNDAF objectives;
- To assess synergies within and between UNIDO projects as well as with related assistance of other donors/agencies;

- To assess the adequacy of coordination and management systems and steering mechanisms;
- To generate findings and draw lessons that can feed into future UNIDO projects and programmes in Indonesia and possibly elsewhere;
- To serve as an input to the Thematic Evaluations to be conducted in 2015:
 - UNIDO interventions in the area of enterprise/job-creation and skills development, including for women and youth;
 - UNIDO procurement process.

3. SCOPE AND FOCUS

The evaluation will cover the full range of UNIDO's activities in Indonesia since 2009. It will try to assess why projects/programmes have succeeded or failed and identify good practices and lessons learned. The evaluation will review all major projects within the ongoing Country Programme, as well as other (non-CP) UNIDO projects implemented in Indonesia since 2009. The evaluation will, furthermore, review coordination and management arrangements and functions.

In this respect, the evaluation will review the performance and impact of selected individual projects and, in a wider sense, the contribution of UNIDO to the development goals of Indonesia. It will focus on projects of a certain size or considered strategically important.

Based on the structure of the Country Programme the projects under this CP fall into the following thematic areas:

- Trade Capacity Building;
- Poverty reduction through productive activities;
- Energy;
- Environment;
- Montreal Protocol.

Country specific projects that are proposed to be included in the country evaluation:

The following Country specific projects having an important budget allotment and state of expenditures – sufficient to measure the outputs -, or that are judged relevant for evaluation are in particular:

These are:

Environment

2. US/INS/12/002. "National Resource Efficient and Cleaner Production Programme in Indonesia".
3. GF/INS/12/001. Introduction of an Environmentally Sound Management and Disposal System for PCBs Wastes and PCB contaminated equipment in Indonesia - Preparatory Assistance.

4. GF/INS/12/003. "Enabling activity to review and update the National Implementation Plan in Indonesia".

Montreal Protocol

5. MP/INS/11/003. HCFC Phase-out management plan (STAGE I, PHASE I) (Umbrella Project to phase out HCFC-141B from the manufacturing of Rigid Polyurethane foam at Isotech Jaya Makmur, Airtekindo, Sinar Lentera Kencana and Mayer Jaya).

Energy

6. GF/INS/11/001, XP/INS/11/002. "Promoting energy efficiency in the industries through system optimization and energy management standards in Indonesia" and UNIDO Contribution for implementation phase of "Promoting Energy Efficiency in the Industries through System Optimization and Energy Management Standards",
7. TE/RAS/12/005, UE/RAS/05/004. "Promotion and transfer of marine current exploitation technology in China and South East Asia (pilot plants)"
8. UE/INS/09/003. Promoting energy efficiency in the industries through system optimization and energy management standards - Government of Italy contribution for project preparation.

Poverty reduction through productive activities

9. TF/INS/08/004 - TF/INS/08/A04 and US/INS/10/002 "Realizing minimum living standards for disadvantaged communities through peace building and village based economic development.

Trade Capacity Building

10. YY/INS/12/X01 and XP/INS/08/002. Increasing trade capacity of the fisheries sector in Indonesia, financed by SECO and UNIDO.

Of the UNIDO projects included in the overall Indonesia project portfolio four projects have already been evaluated by UNIDO or by the donor, one project will be evaluated independently and a field validation mission was conducted. These evaluation findings will be reviewed and will feed into the country evaluation.

These projects are:

- UNIDO Independent Evaluation - Realizing minimum living standards for disadvantaged communities through peace building and village based economic development (TF/INS/08/004 and US/INS/10/002), 2012.
- UNIDO Independent Terminal Evaluation - Promotion and Transfer of Marine Current Exploitation Technology in China and South East Asia (Pilot Plants)" (UE/RAS/05/004), 2014.
- UNIDO Independent Terminal Evaluation - Regional Plan for the Introduction of BAT/BEP Strategies to Industrial Source Categories of Stockholm Convention Annex C of Article 5 in ESEA Region (GF/RAS/10/006), 2014.
- Field validation mission carried out in Indonesia in connection to the internal UNIDO review of UNIDO Montreal Protocol projects, 29 June – 7 July 2009 (Solvent, Methyl Bromide and other Foams sector projects).

To be evaluated individually:

- GFINS11001 “Promoting Industrial Energy Efficiency through System Optimization and Energy Management Standards.”

The country evaluation will also take into consideration the following UNIDO past evaluations covering Indonesia or which addressed issues relevant to the country:

- Independent Thematic Evaluation of UNIDO’s Post-Crisis Interventions. Period covered 2004 – 2012 (2014).
- UNIDO Independent evaluation – INDONESIA. Country Services Framework Phase II, 2005-2007 (2009).

Inter alia, the country evaluation will review to what extent recommendations of the prior CP evaluation have been implemented.

The exact scope of the country evaluation will be decided during the inception period. The evaluation will be participatory and involve stakeholders, including national counterparts, donors and beneficiaries as well as UNIDO project managers and project staff.

Regional projects

As already mentioned, the following regional projects are envisaged to be included in the country evaluation.

Regional projects

TF/RAS/09/004/A04, “Regional Network on Pesticide for Asia and the Pacific” and “NEEM, Phase II - Coordination and technical support services provided by the Regional Network on Safe Pesticide Production and Information for Asia and the Pacific Team (RENPAF)”

Pipeline projects and projects under development

Also pipeline projects and projects in early stage of development are expected to be included in the assessment (with focus on the assessment of their design and relevance. The four following projects were identified:

- 1) Promoting Energy Efficiency (EE) in Small and Medium Industries (SMIs) in Indonesia.
Budget USD 3,000,000 and Co- financing: USD 14.775 million.
Status: PIF is currently under development and discussions with counterparts are ongoing.
Potential Donor: GEF
- 2) The Global Cleantech Innovation Programme for SMEs in Indonesia. Budget: USD 2,000,000 and Co- financing: USD 6 million.
Status: Consultations with potential project partners are ongoing
Potential Donor: GEF

- 3) Introduction of BAT/BEP in the Thermal Processes of the Metallurgical Sector in Indonesia

Status: To be formulated in 2016

Budget: USD 4M

Potential Donor: GEF

- 4) Maluku/NTT Seaweed Sector Development. .

Budget: USD 1,500,000.

Potential Donor: New Zealand.

Status: Prodoc prepared.

4. EVALUATION ISSUES AND KEY EVALUATION QUESTIONS

A. General evaluation and cross-cutting issues

The country evaluation will use the DAC criteria (relevance, efficiency, effectiveness, sustainability and impact). In addition, South-South Cooperation, gender and environmental sustainability will be mainstreamed.

More specifically the evaluation will assess the CP and selected individual projects and aims at answering the questions below.

Relevance

The degree to which the design and objectives of UNIDO's integrated and country programmes is consistent with the needs of the country and with development plans and priorities, as well as with UNIDO's strategic priorities.

The extent to which the country programme was relevant to:

- the development challenges facing the country;
- the UNDAF objectives⁵⁸
- Government strategies and priorities
- UNIDO's strategic priorities (Programme and Budget, Medium Term Strategic Framework);
- UNIDO's policy on Gender Equality (GE) and the Empowerment of Women;
- the Green Industry agenda;
- the different types of beneficiaries (varying per project).

Efficiency

The extent to which:

- UNIDO provided high quality services (expertise, training, equipment, methodologies, technologies, etc.) that led to the production of outputs;

⁵⁸ UNDAF United Nations Development Assistance Framework, Indonesia 2006-2010

- the resources and inputs were converted to results in a timely and cost-effective manner;
- coordination amongst and within components of the programme, synergies and coherence between different UNIDO projects and with related programmes and projects of other donors/agencies lead to collaboration and cooperation among stakeholders and to the production of outputs;
- the same results could have been achieved in another, more cost-effective manner;
- women and men benefitted equally from the programme and its underlying projects;
- outputs were produced in a timely manner;
- procurement process/services were efficient (specific questions are provided as reference and guidance in the Annexe G: UNIDO Procurement Services - Generic Approach and Assessment Framework).

Effectiveness

The extent to which the programmes achieved their objectives and major factors influencing the achievement or non-achievement of the objectives.

The extent to which:

- objectives/results (outcomes and outputs) as formulated in programme/project documents were achieved and how the stakeholders perceive their quality and the beneficiaries use these;
- factors (to be identified) influenced the achievement or non-achievement of the objectives.
- direct and ultimate beneficiaries were actually reached.

Sustainability

Sustainability is concerned with assessing whether the benefits of a project are likely to continue after the project has ended. Projects need to be environmentally as well as financially sustainable.

The extent to which:

- a sustainability strategy was formulated
- there is continued commitment and ownership by the government and other national stakeholders to continue / replicate the project;
- the likelihood that changes or benefits can be maintained in the long term from technical, organizational and financial perspective

Impact

The positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended.

The extent to which the programme and projects contributed (directly or indirectly, in an intended or unintended manner):

- to the promotion of sustainable industrial development, employment generation and competitiveness, and laying the foundation for the graduation of the country from a low-middle income count to becoming a newly industrialized country (Integrated programme objective);
- to the promotion of inclusive growth (including for youth and disadvantaged groups) through the enhancement of productive activities and introduction of environment-friendly technologies (Country programme objective);
- to developmental results (economic, environmental, social);
- to the achievement of the MDGs and national development goals;
- to Gender Equality (GE) and empowerment of women.

Country Programme management

The extent to which:

- efficient cooperation arrangements were established between the Headquarters and project staff and with the UNIDO Regional Office in Indonesia;
- UNIDO's Field Office in Indonesia supported coordination, implementation and monitoring of the programmes;
- UNIDO HQ based management; coordination and monitoring have been efficient and effective;
- management and monitoring systems were adequate.

Partnership and coordination

The extent to which:

- effective coordination arrangements with other development partners were established;
- UNIDO contributed to and was part of the United Nations Development Assistance Framework (UNDAF) Indonesia 2006 – 2010 and 2011-2015;
- the UNIDO Country Programme adhered to the principles of the Paris Declaration on Aid Effectiveness (i.e., government ownership, alignment with government strategies, results orientation, program approaches, use of country systems, tracking results, and mutual accountability).

Cross-cutting issues

The extent to which the programme and its underlying projects addressed the cross-cutting issues of gender equality, environmental sustainability and South-South co-operation.

Project design

The extent to which:

- a participatory project identification process was followed in selecting problem areas and counterparts requiring technical cooperation support;

- the project has a clear thematically focused development objective, the attainment of which can be determined by a set of verifiable indicators;
- the project was formulated based on the logical framework approach;
- the project appropriately reflected the needs and priorities of women, youth and minorities in the design.

Relevance and ownership

The extent to which:

- the project/component was formulated with participation of the national counterpart(s) and/or target beneficiaries, in particular private enterprises and the industrial stakeholders.
- the counterpart(s) has (have) been appropriately involved and was (were) participating in the identification of the critical problem areas and in the development of technical cooperation strategies, and were actively supporting the implementation of the component.
- the project/component is relevant to the higher-level programme-wide objective.
- the project/component is relevant to national and international strategic priorities and the outputs as formulated in the project document are necessary and sufficient to achieve the objectives.

Efficiency

The extent to which:

- UNIDO and Government/counterpart inputs have been provided as planned and were adequate to meet requirements;
- UNIDO provided high quality services (expertise, training, equipment, methodologies, etc.) that led to the production of outputs;
- operationally completed projects are financially closed in a timely manner;
- resources and inputs were converted to results in a timely and cost-effective manner;
- procurement services have been provided as planned and were adequate in terms of timing, value, process issues, responsibilities;
- internal and external synergies with related interventions were sought and established.

Effectiveness

The extent to which:

- outputs and outcomes established in the project document were achieved;
- women and men benefitted equally.

Sustainability

- Sustainability is concerned with assessing whether the benefits of a project are likely to continue after the project has ended. Projects need to be environmentally as well as financially sustainable.

Impact

- Assessment of the developmental changes (economic, environmental, social) which have occurred or are likely to occur.

Procurement

- Assessment of UNIDO procurement processes, to be included as part of country evaluations as well as in technical cooperation (TC) projects/ programmes evaluations.
- The procurement process assessment will review in a systematic manner the various aspects and stages of the procurement process being a key aspect of the technical cooperation (TC) delivery. These reviews aim to diagnose and identify areas of strength as well as where there is a need for improvement and lessons.
- The framework will also serve as the basis for the “Thematic Evaluation of the procurement process efficiency” to be conducted in 2015 as part of the ODG/EVA work programme for 2014-15.

5. EVALUATION APPROACH AND METHODOLOGY

These Terms of Reference (ToR) provide some information as regards the methodology but this should not be regarded as exhaustive. It is rather meant to guide the evaluation team in elaborating an appropriate evaluation methodology that should be proposed, explained and justified in an inception report.

In terms of data collection the evaluation team should use a variety of methods ranging from desk review (project and programme documents, progress reports, mission reports, Agresso search, SAP search, evaluation reports, etc.) to individual interviews, focus group discussions, direct observation at project sites and, where appropriate, statistical analysis, surveys.

The evaluation team should ensure that the findings are evidence based. This implies that all perceptions, hypotheses and assertions obtained in interviews will be validated through secondary filtering and cross checks by a triangulation of sources, methods, data, and theories.

While maintaining independence, the evaluation will be carried out based on a participatory approach, which seeks the views and assessments of all stakeholders. These include government counterparts, private sector representatives, other UN organizations, multilateral organizations, donors, beneficiaries as well as UNIDO and project staff.

Additional methodological components can be defined in the inception report.

6. TIME SCHEDULE

The country evaluation is scheduled to take place between January and March 2015. An evaluation mission 22 February 2015 to 3 March 2015 is planned. The overall times schedule is presented in the table below:

Activity	Estimated month
Collection of documentation by ODG/EVA	December, January, February 2015
Desk review by members of evaluation team	February 2015
Interviews at HQ and development of inception report	February 2015
Field work in Indonesia (2 weeks)	February - March 2015
Presentation of preliminary findings at HQ	March 2015
Drafting of report	March 2015
Collection and incorporation of comments into report	April 2015
Issuance of final report	April 2015

7. EVALUATION TEAM COMPOSITION

The evaluation team will include:

- One ODG/EVA staff member who will also act as evaluation manager.
- One Senior International Evaluation Consultant with experience in Environment and Energy related projects;
- One National Evaluation Consultant;
- One junior Consultant.

The international and national consultants will be contracted by UNIDO. In addition, a junior consultant will be hired for the preparation of relevant documents and coordination before the field mission. The tasks of the consultants are specified in their respective job descriptions, attached to this ToR as Annex B.

All members of the evaluation team must not have been involved in the design and/or implementation, supervision and coordination of any intervention to be assessed by the evaluation and/or have benefited from the programme/projects under evaluation.

One member of UNIDO Office for Independent Evaluation will manage the evaluation and act as a focal point for the evaluation consultants. Additionally, the Field Office in Indonesia will support the evaluation team and assist in planning and coordinating the evaluation mission.

Evaluation process and reporting

The evaluation will use a participatory approach and involves various stakeholders in the different stages of the evaluation process. The responsibilities for the various evaluation stages and outputs are outlined below:

	ODG/EVA	PTC	UNIDO Field Office	Government of Indonesia and national counterparts	Evaluation team
Selection of consultants	X				
Review of background documentation					X
Interviews at UNIDO HQ		X	X		X
Inception report					X
Evaluation mission				X	X
Presentation of preliminary findings in the field				X	X
Presentation of preliminary findings at HQ	X				X
Drafting of evaluation report					X
Comments on draft report	X	X	X	X	
Final evaluation report					X

Evaluation deliverables such as the Inception Report and the Evaluation Report will be approved by the Evaluation Manager.

The evaluation team will present its preliminary findings to the Government and other key national stakeholders at the end of the field mission as well as to programme and project staff and staff at UNIDO Headquarters and at the Field Office in Indonesia. A draft evaluation report will be circulated for comments and factual validation. The reporting language will be English.

The ToR and the draft report will be shared with the national counterparts, the main donors and relevant UNIDO staff members for comments and factual validation. This consultation also seeks agreement on the findings and recommendations. The evaluators will take comments into consideration when preparing the final version of the report. The final evaluation report will be submitted 6-8 weeks after the field mission, at the latest, to the Government of Indonesia and other national stakeholders, to donors and to UNIDO.

8. DELIVERABLES

The following deliverables will be produced by the evaluation team:

- Inception report
- Draft report
- Final report

9. QUALITY ASSURANCE

All UNIDO evaluations are subject to quality assessments by the UNIDO Office for Independent Evaluation. Quality control is exercised in different ways throughout the

evaluation process (briefing of consultants on EVA methodology and process, review of inception report and evaluation report). The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality in Annex C.

10. ANNEXES

- A. Job descriptions for team members
- B. Checklist on evaluation report quality
- C. Tentative evaluation report outline
- D. Reference documents
- E. List of UNIDO projects in Indonesia
- F. Map with project locations
- G. Framework for assessing procurement-related issues.

Annex A of Terms of Reference: Job descriptions for team members

INDEPENDENT UNIDO COUNTRY EVALUATION INDONESIA
Job description

Senior International Evaluation Consultant

Duration of contract: 35 days spread over 4 months

Entry on duty date: 9 February 2015

Duty station: Home-based, Indonesia and Vienna HQ

Duties:

The senior international evaluation consultant will carry out the review of UNIDO's Environment and Energy related interventions in Indonesia according to the terms of reference. In addition she/he will be contributing to the preparation of the evaluation report. The senior international evaluation consultant will perform the following tasks:

Duties	Duration	Location	Results
<p>Preparatory phase</p> <ul style="list-style-type: none"> ○ Study related programme and project documentation (including progress reports and documentary outputs) ○ Study relevant background information (national policies, international frameworks, etc.) ○ Study available evaluation reports and self-evaluation reports 	4 days	Home-based	Analytical overview of available documents and of UNIDO activities in Indonesia
<p>Briefing with Office for Independent Evaluation at HQ</p> <ul style="list-style-type: none"> ○ Inputs to methodology and interview guidelines ○ Interviews with project managers and key stakeholders at HQ ○ Inputs to the inception report 	4 days Incl travel	Vienna, UNIDO HQ Vienna	Key issues of evaluation identified; Scope of evaluation clarified; Inception report , including the proposed methodology, approach and evaluation programme
<p>Field mission to Indonesia</p> <ul style="list-style-type: none"> ○ Carry out meetings, visits and interviews with stakeholders according to the evaluation programme ○ Drafting the main conclusions and recommendations, and present them to stakeholders ○ Inputs to draft evaluation report outline/structure 	12 days (incl. travel)	Indonesia with in- country travel	Information gathered on issues specified in TOR Draft conclusions and recommendations Agreement on structure and content of evaluation report; distribution of writing tasks
<p>Debriefing at UNIDO HQ, Vienna</p> <ul style="list-style-type: none"> ○ Present preliminary findings and 	3 days	Vienna, UNIDO HQ	Feedback on preliminary findings

Duties	Duration	Location	Results
recommendations to the stakeholders at UNIDO ○ Carry out additional interviews if necessary	(incl. travel)		
Drafting of evaluation report ○ Provide inputs to the evaluation report, and drafting sections/chapters under his/her scope. ○ Review/adapt the evaluation report in light of additional evidence presented or factual corrections made; integrate comments from UNIDO Office for Independent Evaluation and stakeholders ○ Final inputs to evaluation report	12 days	Home-based	Draft report Feedback on draft report Final report
Total	35 days		

Qualifications

- Advanced university degree in energy or environment, development studies or other fields related to industrial development;
- Experience in evaluation and coordination of evaluation teams;
- Knowledge in the field of Environmental projects;
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks (Paris Declaration, One UN, etc.) desirable;
- Knowledge of issues related to Sustainable Industrial Development, knowledge of UNIDO activities an asset;
- Working experience within the UN system an asset;
- Working experience in Indonesia an asset.

Languages: English

Background information: see the terms of reference

Impartiality: According to UNIDO rules, the consultant must not have been involved in the preparation, implementation or supervision of any of the programmes/projects under evaluation.

INDEPENDENT UNIDO COUNTRY EVALUATION INDONESIA**Job description****National Evaluation Consultant**

Duration: 24 days spread over 3 months
Date required: 17 February 2015
Duty station: Home-based and various locations in Indonesia

Duties:

As a member of the evaluation team and under the supervision of the evaluation team leader, the consultant will participate in the independent country evaluation in Indonesia according to the terms of reference attached. He/she will participate in all evaluation activities and contribute to the assessments in particular with a view to assessing the UNIDO activities in the field of private sector development, micro enterprise and livelihood development.

Duties	Duration	Location	Results
<ul style="list-style-type: none"> ○ Study relevant programme and project documentation including progress reports and documentary outputs and TOR. ○ Study relevant background information (national policies, international frameworks, etc.) ○ Assist in the preparation of the evaluation mission in close consultation with the UNIDO Focal Point in Indonesia. 	4 days	Home-based	Analytical overview of available documents; list of issues to be clarified; background data needed for evaluation collected at field level; inputs to inception report.
<ul style="list-style-type: none"> ○ Briefing with Office for Independent Evaluation in Indonesia. ○ Participate actively in meetings, visits and interviews according to the evaluation programme; assist with translation if required. ○ Participate in drafting the main conclusions and recommendations, and present them to stakeholders in accordance with the instructions of the team leader. 	10 days	Indonesia with in-country travel	Notes, tables; information gathered on issues specified in ToR; Draft conclusions and recommendations.
<ul style="list-style-type: none"> ○ Participate in the preparation/review of the report according to the instructions of the team leader, and providing country specific background information and national context inputs to the report. <p>Draft inputs based on evaluation to the evaluation report.</p>	10 days	Home-based	Inputs to the report.

Duties	Duration	Location	Results
Incorporate comments received and assist with finalizing the evaluation report, including annexes			
Total	24 days		

Qualifications:

- University degree in a field relevant to economics, development;
- Knowledge of Indonesia's industrial development situation, institutions and programmes;
- Knowledge of UNIDO;
- Evaluation experience.

Languages:

Fluency in oral and written English and preferably good knowledge in Indonesian.

Impartiality:

According to UNIDO rules, the consultant must not have been involved in the preparation, implementation or supervision of the project subject to this evaluation.

INDEPENDENT UNIDO COUNTRY EVALUATION – INDONESIA**Junior Consultant**

Duration: 1 w/m
Date required: February 2015
Duty station: UNIDO HQ, Vienna

Duties of the consultant: The Junior Consultant will assist with the conduct of the Indonesia Country Evaluation; he/she will carry out the following duties:

Duties	Duration (work days)	Deliverables
Participate in the preparation, including mission planning and background research	5 days	Mission programme and desk review document, providing information according to the needs identified in the ToR
Data collection and statistical analyses needed for the preparation of the evaluation report	12 days	Statistical tables and analyses to be used in the report.
Preparation of annexes of the evaluation report.	4 days	Bibliography and list of person consulted.
	10 days	
Total	21 days	

Qualifications:

- Qualification in evaluation, university degree in development, public administration, communications or other relevant degree.
- Knowledge of evaluation and UN/UNIDO projects and programmes.

Competencies: Proven conceptual analytical skills and ability to conduct independent research and analyse data.

Languages: Fluency in oral and written English.

Annex B of Terms of Reference: Checklist on evaluation report quality

Checklist on evaluation report quality:

Independent Terminal Evaluation of the UNIDO Project

“Title.....” (Project Number:)

Evaluation team leader:

Quality review done by:

Date:

Report quality criteria	UNIDO Office for Independent Evaluation: Assessment notes	Rating
Report Structure and quality of writing		
The report is written in clear language, correct grammar and use of evaluation terminology. The report is logically structured with clarity and coherence. It contains a concise executive summary and all other necessary elements as per TOR.		
Evaluation objective, scope and methodology		
<p>The evaluation objective is explained and the scope defined.</p> <p>The methods employed are explained and appropriate for answering the evaluation questions.</p> <p>The evaluation report gives a complete description of stakeholder's consultation process in the evaluation.</p> <p>The report describes the data sources and collection methods and their limitations.</p> <p>The evaluation report was delivered in a timely manner so that the evaluation objective (e.g. important deadlines for presentations) was not affected.</p>		
Evaluation object		
<p>The logic model and/or the expected results chain (inputs, outputs and outcomes) of the object is clearly described.</p> <p>The key social, political, economic, demographic, and institutional factors that have a direct bearing on the object are described.</p> <p>The key stakeholders involved in the object implementation, including the implementing agency(s) and partners, other key stakeholders and their roles are described.</p> <p>The report identifies the implementation status of the object, including its phase of implementation and any significant changes (e.g. plans, strategies, logical frameworks) that have occurred over time and explains</p>		

the implications of those changes for the evaluation.		
Findings and conclusions		
<p>The report is consistent and the evidence is complete (covering all aspects defined in the TOR) and convincing.</p> <p>The report presents an assessment of relevant outcomes and achievement of project objectives.</p> <p>The report presents an assessment of relevant external factors (assumptions, risks, impact drivers) and how they influenced the evaluation object and the achievement of results.</p> <p>The report presents a sound assessment of sustainability of outcomes or it explains why this is not (yet) possible.</p> <p>The report analyses the budget and actual project costs.</p> <p>Findings respond directly to the evaluation criteria and questions detailed in the scope and objectives section of the report and are based on evidence derived from data collection and analysis methods described in the methodology section of the report.</p> <p>Reasons for accomplishments and failures, especially continuing constraints, are identified as much as possible.</p> <p>Conclusions are well substantiated by the evidence presented and are logically connected to evaluation findings.</p> <p>Relevant cross-cutting issues, such as gender, human rights, and environment are appropriately covered.</p>		
Recommendations and lessons learned		
<p>The lessons and recommendations are based on the findings and conclusions presented in the report.</p> <p>The recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?').</p> <p>Recommendations are implementable and take resource implications into account.</p> <p>Lessons are readily applicable in other contexts and suggest prescriptive action.</p>		

Rating system for quality of evaluation reports

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.

Annex C of Terms of Reference: Tentative evaluation report outline

Acronyms and Abbreviations

Glossary of Terms

Executive Summary

MAIN REPORT:

I. BACKGROUND

1. Background and introduction

- evaluation objectives
- methodology
- evaluation process
- limitations of evaluation

2. Country context

- historical context
- brief overview of recent economic development
- industrial situation and relevant sector specific information
- development challenges facing the country
- relevant Government policies, strategies and initiatives
- initiatives of international cooperation partners

3. Description of UNIDO activities in the country

- major TC components, main objectives and problems they address
- brief overview of other important activities

II. ASSESSMENT

4. Performance of TC activities

- Poverty Reduction through Productive Activities
- Trade capacity building
- Energy and Environment

5. Performance in cross-cutting issues

- gender
- environment
- South-South cooperation

III. MAIN CONCLUSIONS AND RECOMMENDATIONS

- Main conclusions from section II will be used as a basis for recommendations.

IV. LESSONS LEARNED

V. ANNEXES

- Annex A: Terms of Reference
- Annex B: List of persons met
- Annex C: Bibliography
- Annex D: Project Assessments and reviews
- Annex E: Country Map and project sites

Annex D of Terms of Reference: Bibliography

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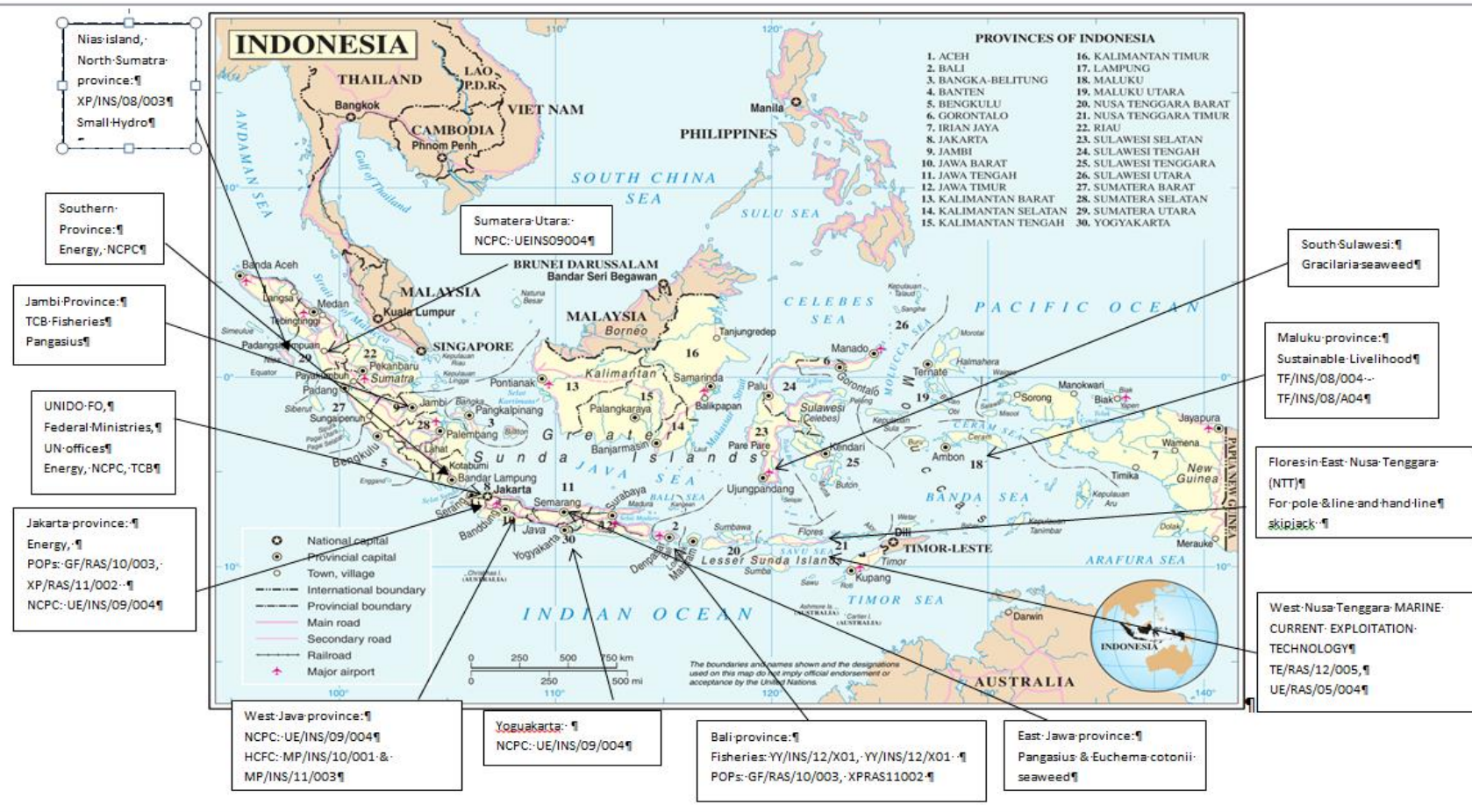
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Annex E of Terms of References: Project sites locations



Annex F of Terms of References: Procurement process

**UNIDO Procurement Process
Generic Approach and Assessment Framework**

Introduction

This document outlines an approach and encompasses a framework for the assessment of UNIDO procurement processes, to be included as part of country evaluations as well as in technical cooperation (TC) projects/ programmes evaluations.

The procurement process assessment will review in a systematic manner the various aspects and stages of the procurement process being a key aspect of the technical cooperation (TC) delivery. These reviews aim to diagnose and identify areas of strength as well as where there is a need for improvement and lessons.

The framework will also serve as the basis for the “thematic evaluation of the procurement process efficiency” to be conducted in 2015 as part of the ODG/EVA work programme for 2014-15.

Background

Procurement is defined as the overall process of acquiring goods, works, and services, and includes all related functions such as planning, forecasting, supply chain management, identification of needs, sourcing and solicitation of offers, preparation and award of contract, as well as contract administration until the final discharge of all obligations as defined in the relevant contract(s). The procurement process covers activities necessary for the purchase, rental, lease or sale of goods, services, and other requirements such as works and property.

Past project and country evaluations commissioned by ODG/EVA raised several issues related to procurement and often efficiency related issues. It also became obvious that there is a shared responsibility in the different stages of the procurement process which includes UNIDO staff, such as project managers, and staff of the procurement unit, government counterparts, suppliers, local partner agencies (i.e. UNDP), customs and transport agencies etc..

In July 2013, a new “UNIDO Procurement Manual” was introduced. This Procurement Manual provides principles, guidance and procedures for the Organization to attain specified standards in the procurement process. The Procurement Manual also establishes that “The principles of fairness, transparency, integrity, economy, efficiency and effectiveness must be applied for all procurement transactions, to be delivered with a high level of professionalism thus justifying UNIDO’s involvement in and adding value to the implementation process”.

To reduce the risk of error, waste or wrongful acts and the risk of not detecting such problems, no single individual or team controls shall control all key stages of a transaction. Duties and responsibilities shall be assigned systemically to a number of individuals to ensure that effective checks and balances are in place.

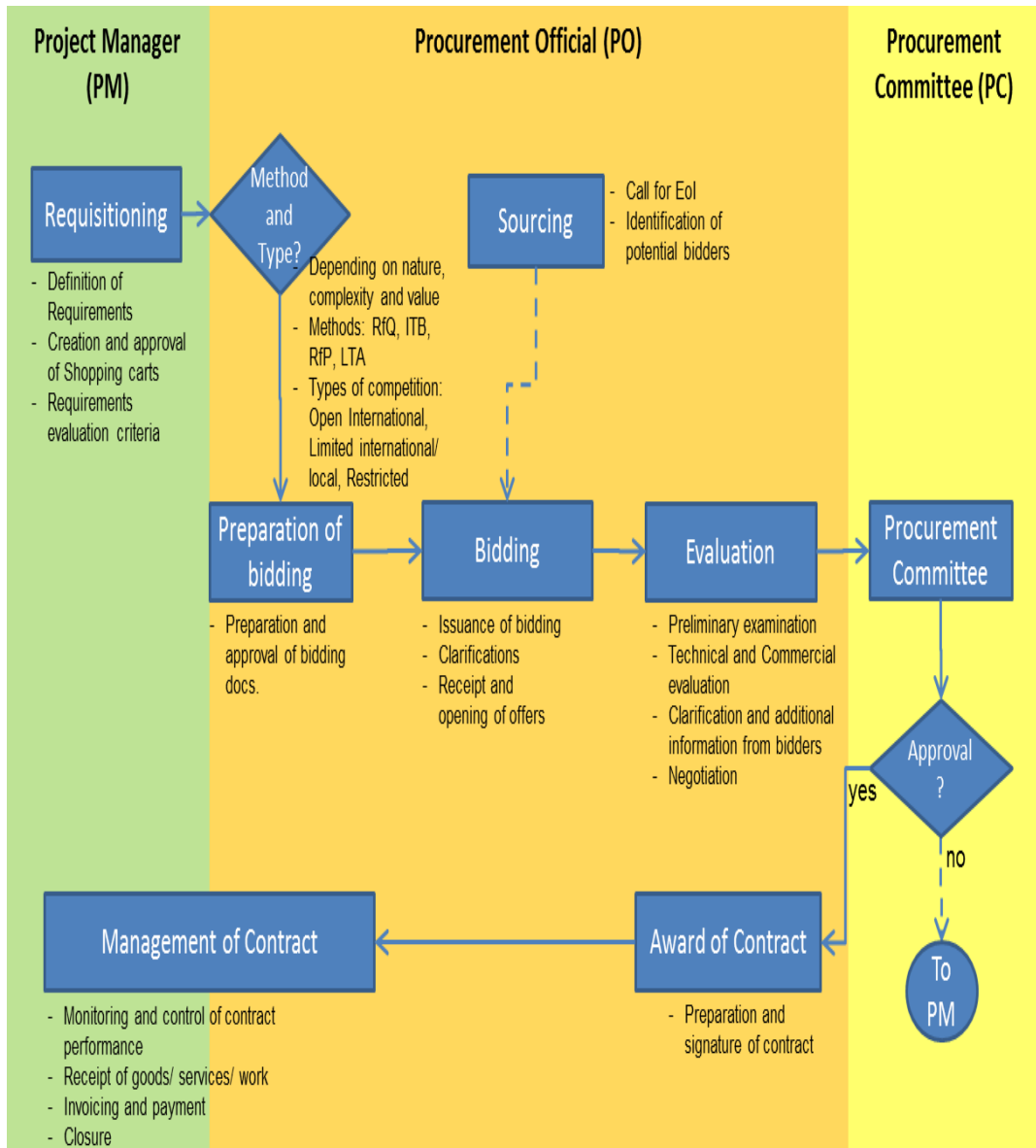
In UNIDO, authorities, responsibilities and duties are segregated where incompatible. Related duties shall be subject to regular review and monitoring. Discrepancies, deviations and exceptions are properly regulated in the Financial Regulations and Rules and the Staff Regulations and Rules. Clear segregation of duties is maintained between programme/project management, procurement and supply chain management, risk management, financial management and accounting as well as auditing and internal oversight. Therefore, segregation of duties is an important basic principle of internal control and must be observed throughout the procurement process.

The different stages of the procurement process should be carried out, to the extent possible, by separate officials with the relevant competencies. As a minimum, two officials shall be involved in carrying out the procurement process. The functions are segregated among the officials belonging to the following functions:

- Procurement Services: For carrying out centralized procurement, including review of technical specifications, terms of reference, and scope of works, market research/surveys, sourcing/solicitation, commercial evaluation of offers, contract award, contract management;
- Substantive Office: For initiating procurement requests on the basis of well formulated technical specifications, terms of reference, scope of works, ensuring availability of funds, technical evaluation of offers; award recommendation; receipt of goods/services; supplier performance evaluation. In respect of decentralized procurement, the segregation of roles occur between the Project Manager/Allotment Holder and his/her respective Line Manager. For Fast Track procurement, the segregate on occurs between the Project Manager/Allotment Holder and Financial Services;
- Financial Services: For processing payments.

Figure 2 presents a preliminary “Procurement Process Map”, showing the main stages, stakeholders and their respective roles and responsibilities. During 2014/2015, in preparation for the thematic evaluation of the procurement process in 2015, this process map/ workflow will be further refined and reviewed.

Figure 2: UNIDO Procurement Process Map



Purpose

The purpose of the procurement process assessments is to diagnose and identify areas for possible improvement and to increase UNIDO’s learning about strengths and weaknesses in the procurement process. It will also include an assessment of the adequacy of the ‘Procurement Manual’ as a guiding document.

The review is intended to be useful to managers and staff at UNIDO headquarters and in the field offices (project managers, procurement officers), who are the direct involved in procurement and to UNIDO management.

Scope and focus

Procurement process assessments will focus on the efficiency aspects of the procurement process, and hence it will mainly fall under the efficiency evaluation criterion. However, other criteria such as effectiveness will also be considered as needed.

These assessments are expected to be mainstreamed in all UNIDO country and project evaluations to the extent of its applicability in terms of inclusion of relevant procurement related budgets and activities.

A generic evaluation matrix has been developed and is found in Annex B. However questions should be customized for individual projects when needed.

Key issues and evaluation questions

Past evaluations and preliminary consultations have highlighted the following aspects or identified the following issues:

- Timeliness. Delays in the delivery of items to end-users.
- Bottlenecks. Points in the process where the process stops or considerably slows down.
- Procurement manual introduced, but still missing subsidiary templates and tools for its proper implementation and full use.
- Heavy workload of the procurement unit and limited resources and increasing “procurement demand”.
- Lack of resources for initiating improvement and innovative approaches to procurement (such as Value for Money instead of lowest price only, Sustainable product lifecycle, environmental friendly procurement, etc.).
- The absence of efficiency parameters (procurement KPIs).

On this basis, the following evaluation questions have been developed and would be included as applicable in all project and country evaluations in 2014-2015:

- To what extent does the process provide adequate treatment to different types of procurement (e.g. by value, by category, by exception)?
- Was the procurement timely? How long did the procurement process take (e.g. by value, by category, by exception)?
- Did the good/item(s) arrive as planned or scheduled? If not, how long were the times gained or were the delays. If delay occurred, what was the reason(s)?
- Were the procured good(s) acquired at a reasonable price?
- To what extent were the procured goods of the expected/needed quality and quantity?
- Were the transportation costs reasonable and within budget. If not, please elaborate.
- Was the freight forwarding timely and within budget? If not, please elaborate.
- Who was responsible for the customs clearance? UNIDO FO? UNDP? Government? Other?

- Was the customs clearance handled professionally and in a timely manner? How long did it take?
- How long did it take to get approval from the government on import duty exemption?
- Which were the main bottlenecks / issues in the procurement process?
- What good practices have been identified?
- To what extent are roles and responsibilities of the different stakeholders in the different procurement stages established, adequate and clear?
- To what extent is an adequate segregation of duties across the procurement process and between the different roles and stakeholders in place?

Evaluation method and tools

These assessments will be based on a participatory approach, involving all relevant stakeholders (e.g. process owners, process users and clients).

The evaluation tools to be considered for use during the reviews are:

- **Desk Review:** Policy, Manuals and procedures related to the procurement process. Identification of new approaches being implemented in other UN or international organizations. Findings, recommendations and lessons from UNIDO Evaluation reports.
- **Interviews:** to analyse and discuss specific issues/topics with key process stakeholders
- **Survey to stakeholders:** To measure the satisfaction level and collect expectations, issues from process owners, user and clients
- **Process and Stakeholders Mapping:** To understand and identify the main phases the procurement process and sub-processes; and to identify the perspectives and expectations from the different stakeholders, as well as their respective roles and responsibilities
- **Historical Data analysis from IT procurement systems:** To collect empirical data and identify and measure to the extent possible different performance dimensions of the process, such as timeliness, re-works, complaints, etc.

An evaluation matrix is presented in below, presenting the main questions and data sources to be used in the project and country evaluations, as well as the preliminary questions and data sources for the forthcoming thematic evaluation on Procurement process in 2015.

Evaluation Matrix for the Procurement Process

No.	Area	Evaluation question	Indicators ⁵⁹	Data Source(s) for country / project evaluations	Additional data Source(s) for thematic evaluation of procurement process in 2015
	Timeliness	Was the procurement timely? How long the procurement process takes (e.g. by value, by category, by exception...)?	(Overall) Time to Procure (TTP)	Interviews with PMs, Government counterparts and beneficiaries	Procurement related documents review SAP/Infobase (queries related to procurement volumes, categories, timing, issues)
		Did the good/item(s) arrive as planned or scheduled? If not, how long were the times gained or delays. If delayed, what was the reason(s)?	Time to Delivery (TTD)	Interviews with PM, procurement officers and Beneficiaries	Evaluation Reports Survey to PMs, procurement officers, beneficiaries, field local partners.
		Was the freight forwarding timely and within budget? If not, please elaborate.			Interviews with Procurement officers
		Was the customs clearance timely? How many days did it take?		Interviews with PMs, Government counterparts and beneficiaries	
		How long time did it take to get approval from the government on import duty exemption?	Time to Government Clearance (TTGC)	Interviews with beneficiaries	
	Roles and Responsibilities	To what extent roles and responsibilities of the different stakeholders in the different	Level of clarity of roles and responsibilities	Procurement Manual Interview with PMs	Procurement related documents review Evaluation Reports

⁵⁹ These indicators are preliminary proposed here. They will be further defined and piloted during the Thematic Evaluation of UNIDO procurement process planned for 2015.

No.	Area	Evaluation question	Indicators ⁵⁹	Data Source(s) for country / project evaluations	Additional data Source(s) for thematic evaluation of procurement process in 2015
		procurement stages are established, adequate and clear?			Survey to PMs, procurement officers, beneficiaries, field local partners.
		To what extent there is an adequate segregation of duties across the procurement process and between the different roles and stakeholders?		Procurement Manual Interview with PMs	Interviews with Procurement officers
		How was responsibility for the customs clearance arranged? UNIDO FO? UNDP? Government? Other?		Procurement Manual Interview to PMs Interviews with local partners	
		To what extent were suppliers delivering products/ services as required?	Level of satisfaction with Suppliers	Interviews with PMs	
	Costs	Were the transportation costs reasonable and within budget. If no, please elaborate.		Interviews with PMs	Evaluation Reports Survey to PMs, procurement officers, beneficiaries, field local partners.
		Were the procured goods/services within the expected/planned costs? If no, please elaborate	Costs vs budget	Interview with PMs	Interviews with Procurement officers
	Quality of Products	To what extent the process provides adequate treatment to different types of		Interview with PMs	Evaluation Reports Survey to PMs, procurement officers,

No.	Area	Evaluation question	Indicators ⁵⁹	Data Source(s) for country / project evaluations	Additional data Source(s) for thematic evaluation of procurement process in 2015
		procurement (e.g. by value, by category, by exception...)?			beneficiaries, field local partners.
		To what extent were the procured goods of the expected/needed quality and quantity?	Level of satisfaction with products/services	Survey to PMs and beneficiaries Observation in project site	Interviews with Procurement officers
	Process / workflow	To what extent the procurement process is fit for purpose?	Level of satisfaction with the procurement process	Interviews with PMs, Government counterparts and beneficiaries	Procurement related documents review Evaluation Reports
		Which are the main bottlenecks / issues in the procurement process?		Interviews with PMs, Government counterparts and beneficiaries	Survey to PMs, procurement officers, beneficiaries, field local partners.
		Which part(s) of the procurement process can be streamlined or simplified?		Interview with PMs	Procurement related documents review Evaluation Reports Survey to PMs, procurement officers, beneficiaries, field local partners. Interviews with Procurement officers

Annex B: List of people met

Name	Job title/Position in company/Organization
UNIDO HQ	
Ms. Margareta de Goys	Director, Office for Independent Evaluation, UNIDO
Mr. Segbedzi Norgbey	Senior Evaluation Consultant, UNIDO Evaluation Team
Ms. Farsidah Lubis	Evaluation Consultant, UNIDO Evaluation Team
Ms. Carmela Centeno	Project Manager, UNIDO
Mr. Imran Farooque	Chief and Deputy to the Director, UNIDO
Mr. Cornelius Van Berkel	Unit Chief, UNIDO
Mr. Imran Sanjaya Shretha	Project Manager, UNIDO
Mr. Milan Demko	Industrial Development Officer, UNIDO
Ms. Erlinda Galvan	Associate Industrial Development Officer, UNIDO
Ms. Petra Schwager	Project Manager, UNIDO
MINISTRY OF INDUSTRY INDONESIA	
Mr. A. Riyanto	Director of International Industrial Cooperation Directorate General of International Industrial Cooperation
Mr. Ngakan Timur Antara	Director Centre for Green Industry and Environment Assessment Agency for Industrial Policy, Business Climate and Quality Assessment
Mr. Azhar Fitri	Head of the Sub-Directorate for Multilateral Cooperation Directorate for International Industrial Cooperation (Multilateral Cooperation)
Ms. Emmy Suryandari	Head, Sub-Division for Global Environment
Ms. Yulia A.P.	Head, Section for other Multilaterals
Ms. Dewi S.	Head Section for WTO and Commodity-related Organizations
Mr. Medino D.P.	Sub-Directorate for Multilateral Affairs
Ms. Artati Widiarti	Director of Foreign Market Development Directorate General of Fisheries Products Processing and Marketing
Mr. Yulianto	Deputy Director, Promotion and Collaboration Directorate General of Fisheries Product Processing and Marketing

Name	Job title/Position in company/organization
MINISTRY OF ENVIRONMENT AND FORESTRY (MOEF)	
Mr. Nixon Pakpahan	Office of the Deputy Minister for Toxic and Hazardous Substances
Ms. Emma Rachmawaty	Deputy Minister for Mitigation and Atmospheric Function Preservation
Ms. Tota Sihite	National Ozone Unit Office of the Assistant Deputy Minister for Mitigation and Atmospheric Function Preservation
Ms. Vinda Damayanti	Office of the Assistant Deputy Minister on Standards and Technology
MINISTRY OF ENERGY AND MINERAL RESOURCES	
Ms. Maritje Hutapea	Director for Energy Conservation
JAKARTA FISHERIES UNIVERSITY	
Mr. Tb. Haeru Rahayu	Deputy Director for Academic Affairs Jakarta Fisheries University Agency for Marine and Fisheries Human Resources Development
Mr. Aef Permadi	Head of the Valcapfish Center and Lecturer at the Jakarta Fisheries University
Mr. I Ketut Sumandiarsa	Secretary of the Valcapfish Center and Lecturer at the Jakarta Fisheries University
Mr. Guntur	Lecturer, Jakarta Fisheries University
Mr. Aris Widagdo	Lecturer, Jakarta Fisheries University
Mr. Bongbongan Kusmedy	Lecturer, Jakarta Fisheries University
CENTER FOR RESOURCE EFFICIENT AND CLEANER PRODUCTION INDONESIA (CRECPI), INSTITUT TEKNOLOGI BANDUNG	
Ms. Puji Lestari	Deputy Director, Centre for Resource Efficient and Cleaner Production Indonesia (CRECPI) concurrently Professor Faculty of Civil and Environmental Engineering
PT KMK GLOBAL SPORTS	
Mr. Antonius Risdriyanto	Management Representative PT KMK Global Sports
Mr. Arwan Nur	Energy Manager
PT AIRTEKINDO PRIMA	
Mr. Toto Djamaludin	Director PT AIRTEKINDO PRIMA TD Pre-Insulated Aluminium Duct
Mr. Johanes Widjaja	Technical Staff

Name	Job title/Position in company/organization
MINISTRY OF ENVIRONMENT AND FORESTRY (MOEF)	
	PT AIRTEKINDO PRIMA TD Pre-Insulated Aluminum Duct
Field Visit to Maluku	
Mr. Anthonius Sihaloho	Head Provincial Development Planning Agency (BAPPEDA)
Ms. Maria A. Leha	Head Regional Industrial Standards Agency (BARISTAN)
Ms. Sandra Lakembe	Former National Project Coordinator
Mr. Isra Amin	Former Administrative Officer
UNICEF	
Ms. Hellen Parera	Operations Assistant, UNICEF Ambon Area
EMBASSY OF SWITZERLAND	
Mr. Martin Stottele	Head of Economic Development Cooperation (SECO)
Ms. Dewi Suyenti Tio	National Program Officer Economic Development Cooperation (SECO)
UNITED NATIONS AGENCIES IN INDONESIA	
Mr. Douglas Broderick	United Nations Resident Coordinator
Ms. Michiko Miyamoto	Deputy Director, International Labour Organization (ILO)
Mr. Ageng S. Herianto	Assistant FAOR (Programme), Food and Agriculture Organization FAO Representative Office in Indonesia
PROJECT PERSONNEL IN INDONESIA	
Mr. Sudari Pawiro	National Chief Technical Adviser
Mr. Nahrudin Alie	National Project Officer
Mr. Ray Chandra P	National Project Officer
Ms. Rani Fitriany	Programme Assistant
Mr. Aris Ika Nugrahanto	National Project Coordinator
Ms. Ira Palupi	National Programme Officer
Ms. Noordiana K.	Project Assistant
Mr. Nicolas Hutasoit	National Expert, Systems Optimization
Mr. Propana O. Ali	Intern
Mr. Rio Deswandi	National Project Manager
Ms. Ira Palupi	National Programme Officer
Ms. Deasy Sriayu	Project Assistant
Mr. Nahrudin Alie	National Project Officer
Mr. Mochammad Iqbal	National Project Manager, CRECPI

Name	Job title/Position in company/organization
MINISTRY OF ENVIRONMENT AND FORESTRY (MOEF)	
UNIDO REPRESENTATIVE OFFICE IN INDONESIA	
Ms. Shadia Yousif Bakhait	UNIDO Representative
Mr. Moh. Saiful Bahri Saha	National Programme Officer
Ms. Lolyntina Utoro	Senior Secretary
Mr. Y. Zakaria	First Secretary Indonesian Permanent Mission to the United Nations

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