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EXECUTIVE SUMMARY

Project Cycle Management (PCM) can be applied to any discipline. In this guide, the PCM is applicable to the apiculture sub-sector in Zambia for the purpose of enhancing the capacity of Trade Support Institutions (TSIs) in the sector. Many scholars have already written about PCM; and so this guide does not cover all the topics in project management. The main objectives of the guide are (i) to help the TSIs understand how projects are managed and apply this knowledge to the apiculture and (ii) to impart skills in effective proposal writing for funding.

The guide is divided into two parts; Part I discusses the PCM while Part II has been devoted to the apiculture industry in Zambia. Issues discussed in Part I are:-

Definition and scope of project management

- Phases of a project
- Results-based management
- Project governance and control
- Proposal writing
- The role of the project manager (PM) and why projects fail
- Project termination process

Part II covers specific topics in apiculture such as;

- Introduction to beekeeping in Zambia
- Beekeeping sub-sector issues that cover beekeeping policy, bee products and markets.

Given the importance of the sub-sector to contributing to poverty reduction in rural areas, Appendix I is a concept note for establishing a Honey Desk Office at the Zambia Development Agency (ZDA).
INTRODUCTION

ITC is currently implementing the project “Promoting Intra-regional trade in Eastern Africa- Zambia”, which aims to contribute to inclusive and sustainable export-led growth in Zambia by improving the competitiveness of producers, SMEs and TSIs. The three-year project (2014-2016), which is financed by the Finland Ministry of Foreign Affairs, promotes the participation of SMEs in regional and global value chains. The project will address value chain inefficiencies combined with measures to strengthen TSIs in the sector, and is expected to result in increased income and employment for stakeholders along the entire export value chain.

The primary focus of the project is to capacitate honey producers and exporters to achieve international quality and standards requirements for food security, organic production and traceability. The project also aims to further develop the managerial and operational capacities of Trade Support Institutions (TSIs) servicing the needs of SMEs in the apiculture sector, by improving and extending their range of relevant trade support services, and building their operational and managerial capacities. Generally, the project has positive implications on the current Enhanced Integrated Framework (EIF) Tier 2 Trade and Investment Project for Enhanced Competitiveness of Zambia’s Apiculture sector (TIPEC-ZAS) project through direct linkages and complementarities by addressing challenges affecting downstream players along the value-chain. The project’s anticipated strong interconnectedness offers a strategic intervention for the development of the apiculture sector, and to this end, good potential for increasing regional trade and enhancing growth and prosperity. Key TSIs supporting the apiculture sector in Zambia include the Zambia Honey Council (ZHC), the Organic Processors and Producers Association of Zambia (OPPAZ), the Agri-Business Forum (ABF) and the Zambia Development Agency (ZDA). An institutional mapping and assessment of these TSIs was conducted by ITC over the period from July to August 2014 and recommendations were made towards interventions that need to be undertaken towards the development of their managerial and operational capacities. One of the key weaknesses identified is the inability by these organisations to sustain their operations on membership subscriptions. The TSIs have therefore been delivering most of their technical services through projects supported by external financiers, including both bilateral and multilateral donors. However, the assessment revealed that the TSIs have inadequate capacity and skills for project development, management, and monitoring and evaluation to optimally secure and harness project financing. These organisations therefore need capacity building to address these weaknesses, and to enable them to better manage the implementation of their strategic plans.

As part of the process to address this weakness, ITC will be conducting training in Project Cycle Management from 2 to 4 November, 2014 at the Cresta Golfview Hotel in Lusaka, Zambia. The training will be preceded by an assessment of training needs aimed at articulating the specific knowledge and skills that prospective participants already have, and the key gaps to be filled by the training. The training will thereafter be complemented by coaching sessions.
1.1.1. Objectives:

The overall objective of the training workshop will be to provide participants with sound tools for Project Cycle Management including project design, implementation, project cycle management, project monitoring and implementation, as well as how to secure external project financing.

Specific objectives of the training are as follows:

1. To enable participants to be able to design/write project proposals for the funding of their projects.
2. To make participants aware of the PCM process, tools and structure and how to manage projects in the apiculture industry in Zambia.
3. To help participants understand the basics of the apiculture industry in Zambia.
4. To help participants understand the various bee products for increased export development.
5. To help the participant appreciate the relationship between the general PCM and the beekeeping life cycle and how to plan market development based on these two cycles.

1.1.2. Target Beneficiaries:

Participants in the training on PCM will comprise staff from ZDA, ZHC, OPPAZ and ABF, as well as honey sector players that are members of the three TSIs. Others will be drawn from the National Implementation Unit of the Enhanced Integrated Framework.

1.1.3. Contribution to Project Output:

The training workshop will contribute to the achievement of Output 2.1 of the Project “Managerial and operational capacities of Trade Promotion Organisations and selected sectoral Trade Support Institutions Strengthened” by developing the ability of participants to deliver key outputs of their strategic interventions through project financing.

While this manual offers guidance on how to manage projects, it also offers direction on how to develop proposals for funding future projects in the apiculture industry in Zambia. Due to the constraints of time, the contents are by no means exhaustive, but they do provide the essential elements of proposal writing and project cycle management on which workshop participants are encouraged to build their practice. As the saying goes, “experience is the best teacher”. The more the trainees practice how to write proposals, the more competent they will become. The pedagogical approach of the workshop includes lecture presentations, case studies, group work and open discussion. This assignment had three components namely; the workshop, training manual and a one-on-one coaching sessions with the workshop participants that is meant to reinforce the workshop presentations.

This booklet is divided into two parts. Part I covers an introduction to project management, concepts and tools, results-based management and proposal writing among other topics; while Part II is devoted to the apiculture industry in Zambia and its environment.
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ACRONYMS

Unless otherwise specified, all references to dollars ($) are to United States dollars OF Euro (€), and all references to tons are to metric tons. The following abbreviations are used:

ABF Agri-business Forum
ClIFOR International Center for Forest Research
EIF Enhanced Integrated Framework
EU European Union
HACCP Hazard Analysis and Critical Control Points
ITC International Trade Centre
NWP North-Western Province
OPPAZ Organic Producers and Processors Association of Zambia
PCM Project Cycle Management
PM Project Manager
PMI Project Management Institute
PMO Project Management Office
RBM Results Based Management
SMART Specific, Measurable, Attainable, Realistic, Time bound
TSIs Trade Support Institutions
UNCTAD United Nations Conference on Trade and Development
WBS Work Breakdown Structure
WIITFM What is in it for me
WTO World Trade Organization
ZDA Zambia Development Agency
ZHC Zambia Honey Council
Project management, like any management tool, requires a unique approach and has its own rules, procedures and tools that are available for any user of this management system. Although it may sound new to some, many organizations and individuals have already practised the art of project management either consciously or unconsciously, only it may not have had the necessary procedures at that point.

For some time now, the use of project management tool for achieving organizational objectives, especially in new product development and other engineering areas, has increased tremendously. It must be noted that its use has now spread to almost all facets of life and its disciplines, such as the carrying out of audits by accountants, the construction of bridges by engineers, or the building of shopping malls by contractors. Its use is unlimited. The use of project management tools is driven by (a) the need to increase the speed of getting new products to the market, (b) the need to control costs and to adhere to the schedule, and (c) the propensity to see the final product using a new method other than the traditional business-as-usual approach.

1.1.4. What is project management?

According to the Project Management Institute (PMI), project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. This is achieved by using the identified processes which are available in the project life cycle (initiation, planning, execution, controlling and closing).

1.1.5. What is a project?

“A project is a temporary endeavour undertaken to create a unique product or service”. Temporary means every project has a start and end date. This definition has key concepts about a project that need to be appreciated, and these are:

1. **Unique in nature.** No two project are similar in objective and resource allocation.
2. **Defined timescale.** Every project has a lifespan. It cannot be in perpetuity.
3. **An approved budget.** There must be an approved budget so that the project manager can make decisions about expenditure.
4. **Limited resources.** Resources, whatever they are, are always limited in supply.
5. **Element of risk.** All projects carry risks of varying degree and impact on a project.
6. **Achieve beneficial change.** There should be an outcome that will impact on the audience/community.

1.1.6. Why project management?

There is a tendency to think that project management can only be applied to big construction activities with multi-billion dollar budgets. While this is valid there are numerous projects with small budgets that may go unnoticed. In the apiculture industry, honey production is dependent on seasons that are predictable and the flowering cycle of the trees in the forests makes it worthwhile for the Trade Support Institutions (TSIs) in Zambia, or anywhere in the world, to understand this and link it to market development, processing, and the supply of bee products. Therefore, the appreciation of the two cycles is critical to the commercial success of the TSIs clients and the whole honey value chain.
1. OBJECTIVES OF PROJECT MANAGEMENT

Project management has three specific cornerstones on which it hinges for its identification, namely (a) the scope of work (b) the schedule and (c) the budget.

(a) Scope of work/project scope – the work that needs to be done. This extends to its quality, deliverables, project product, and project objectives. It consists of the accepted/agreed quality of the work done, specifications, and design.

(b) Schedule – this is the length of time within which the project is required to be completed. The schedule includes tasks to be performed, milestones to be met, the dependences of tasks (if available), the framework for controlling and monitoring the project and the timing for resource allocation, and it identifies critical activities that, if delayed, will delay the completion of the project.

Critical path – series of activities that determine the duration of the project.

(c) Budget – this is the monetary cost of a project. It determines the value of the project. It is highly dependent on the scope and schedule.

2. METHODS OF PROJECT SELECTION

Project selection is first stage in the process in determining what relevant projects the organization will need to take for the purpose of that organization to meet its objectives. For instance, a TSI can select which province to recruit more beekeepers from, or which categories in the honey value chain may need training in HACCP, packaging, branding, or export development. Choosing what project to implement may prove to be a very difficult task.

In this section, we discuss some of the methods organizations used to select projects for implementation. The proper decision made to choose a project is crucial to the survival of an organization. Several projects that have been mooted without using any selection methods have often died in their infancy or have not benefited the intended target group. Using project selection methods reduces the risk of project failure. Choosing a project selection method is based on the following criteria that have been promoted by Souder (1973).

a. Realism– the model must reflect the organization’s reality and capacity (human, financial, facilities etc.). For example, project A may strengthen the TSI's beekeepers associations by providing technical training in modern beekeeping, while project B may look at improving the honey value chain competitiveness by supplying honey processing equipment.

b. Capability– the model should be able to deal with various internal and external situations (strikes, bad weather, policy shifts etc.).

c. Flexibility– the model should be flexible enough without compromising outcomes.

d. Ease of use– it must be easy to use and data sets must relate to each other.

e. Cost– the cost of data collection and modelling should not exceed the cost of the project.

f. Easy computation– it must be easy to store and retrieve data in any computer database.

Project selection methods fall into two categories; numerical and non-numerical. Many organizations use either of the two or a combination of both methods. Non-numerical methods do not use numbers as inputs, while numerical methods use numbers, and one can easily then compare “an apple for an apple”. In determining what model to use, it must be borne in mind that (i) models do not make decisions and (ii) models are partially representative of the reality on the ground.
2.1.1. Types of project selection models

a. Non-numerical methods: The sacred cow/water cooler – often suggested by a senior manager in an informal way or started as a casual discussion in a coffee room.

i. Operating necessity – used when the project is developed in order to sustain the system to operate.

ii. Competitive necessity – this is used for the purpose of an organization remaining competitive in the market place.

iii. Product line extension – i.e. increasing the product range from honey to propolis or royal jelly may require more equipment.

iv. Comparative benefit – choosing a project among other sub-sets that may benefit an organization but lack comparability e.g. new product development, changes in production methods.

b. Numerical methods: profitability

i. Payback period – a period within which the project must cover its costs.

ii. Average rate of return- calculated as the average ratio of annual profits based either on tax or on net of taxes to the initial investment in the project.

iii. Discounted cash flows- also known as the Net Present Value (NPV) determines the net cash flows by discounting them at a rate of return (hurdle rate, cut off rate.

iv. Internal rate of return- “the rate of return promised by an investment project over the life of the project”.¹

v. Profitability index- this is the NPV of all future expected cash flows divided by the initial investment. If the ratio is great than one then the project can go on.

Numerical models: scoring

Un-weighted 1-0 factor method: this is where raters score the project on each factor that has been provided. The raters are chosen by senior managers and the criteria for choosing them are that the raters (i) clearly understand the organization’s goals and (ii) that they have a good knowledge of the organization’s project portfolio. The figure below shows how a weighted evaluation model is used.

Table 1: Example of weighted scoring model for a beekeeping project

<table>
<thead>
<tr>
<th>Description</th>
<th>Qualifies</th>
<th>Does not qualify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in household income</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Potential market</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Protects the environment</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Gender restriction</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Increased knowledge</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Location (Lusaka)</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Consistent with current line of business</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Impact on job creation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Impact on women</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>2</td>
</tr>
</tbody>
</table>

According to this model, the project can proceed since it has scored more on ‘qualifies’ than on ‘does not qualify’.

¹– Noreen Garrison, p643
CHAPTER 2: PROJECT PHASES

Given that projects have a start and end date, they surely pass through certain stages. Various authors have categorised a project as having 3 to 5 phases. This discrepancy arises from some authors compressing the activities in stage 1 and stage 2 of planning into one phase, while others add a phase after project identification to include project appraisal. In this guide, version 4 (in the Figure below) is discussed since this is the one most popular with UN agencies and other donors. Although the versions differ, they have something in common.

Figure 1: Different versions of project phases

<table>
<thead>
<tr>
<th>Version 1</th>
<th>Version 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project design</td>
<td>Project identification</td>
</tr>
<tr>
<td>Project execution</td>
<td>Project planning</td>
</tr>
<tr>
<td>Project closure</td>
<td>Project execution</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Version 3</th>
<th>Version 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>Project identification</td>
</tr>
<tr>
<td>Defining project</td>
<td>Formulation</td>
</tr>
<tr>
<td>Implementation</td>
<td>Appraisal</td>
</tr>
<tr>
<td>Organize</td>
<td>Implementation</td>
</tr>
<tr>
<td>Control</td>
<td>Execution</td>
</tr>
<tr>
<td>Close</td>
<td></td>
</tr>
</tbody>
</table>

3. PHASE 1: PLANNING

During this phase, as a project designer, you are defining what the project will be. The following activities constitute the main parts of this phase:

State the problem – what are the issues that the problem would want to address? Low TSI membership, poor production, and poor product quality? Loss of income? Honey market failures?

Identify project goals – what are the goals of the project? What is the end game that the project would want to achieve?

List the objectives – once the goals are known, the project promoter should now list the specific objectives that the project wants to achieve. Using the SMART (Specific, Measurable, Attainable, Realistic, and Time-specific) model would help to focus on desired deliverables. For instance, the project desires to train 50 women in Mwinilunga in honey processing in 2015.

Determine preliminary resources and risk assessment – what resources will the project require? What risks are associated with obtaining any of these resources? What challenges may occur along the way that will derail the project? What will be the effect of the delay on the project budget or schedule?
PART I: PROJECT MANAGEMENT.

Estimate the cost and time – when estimating the cost, four major categories should come to mind, and these are (a) labour costs (b) materials costs (c) overheads and (d) fixed costs.

Sequencing project activities – the next step after listing the activities is to sequence them in a logical manner so that dependences and precedents activities are identified for resource allocation and for determining the critical path.

Planning involves the establishment of clear goals and objectives of the project, and the scope of work. The following are the activities to be carried out during the planning phase of the project:

- Project identification
- Stating the problem
- Identifying project goals
- Determining project resources
- Identifying risks associated with the project
- Identifying project activities
- Budgeting time and cost
- Sequencing the project activities
- Feasibility studies and appraisal
- Proposal writing

Most development agencies demand that a project appraisal be carried out as part of the planning stage. A project appraisal is a comprehensive systematic assessment of all aspects of a project. The results of a project appraisal will provide a go/no go decision. It is an important decision tool that lays the ground for implementation. It addresses the appropriateness of the project objectives, size, budget, methods of implementation, time scale, financial, technical, environmental, practicality of implementation, and social issues (tribal/race/gender/age). Some of the questions that a project appraisal answers are:

- Is the project addressing the needs of the local community?
- Are there links between the local programs?
- Has the project secured local community consent?
- What are the risks and uncertainties of the intended project?
- Is the project sustainable?

The deliverable under the planning phase is the project overview, Work breakdown Structure (WBS), project network, critical path, and project proposal.

4. PHASE 2: IMPLEMENTING

Some of the activities under the implementation execution phase are:

- Determining personnel needs
- Recruit the project manager
- Recruit the project team
- Organize the project team
- Assign work packages

The expected deliverables under this phase are the recruitment criteria, description of work packages, and assignment of work packages to team members.
5. **PHASE 3: IMPLEMENTATION**

Phase 3 is a continuation of the implementation phase. During this phase, the PM is exerting her management skills, controlling the project, motivating the project team, reviewing the project schedule and budget, and ensuring that the milestones are met. In addition, she is preparing the project status report for the project stakeholders and attending to project change orders.

The deliverables are variance reports, status reports, and staff resource management.

6. **PHASE 4: CLOSURE/TERMINATION**

Phase 4 is the last part of the project and it is during this time that stakeholders determine if the project achieved its intended objectives. Some of the activities during this phase are evaluating the project, obtaining client acceptance to terminate the project, documenting the project for future reference, issuing final project reports, terminating all contracts with suppliers and obtaining statements, laying off excess resources (staff, equipment maybe transferred to the project implementer), and conducting a post-project audit.

There are several reasons for terminating the project. The following have been identified as possible reasons for the termination:

1. Termination by extinction – because a project has achieved its objectives, or due to its unsuccessful performance, mergers of organizations, or company politics.
2. Termination by addition – this happens when the project has matured and is fused into the organization, sometimes as a new department or division.
3. Termination by integration – this is similar to termination by addition, the only difference is that in integration, the final product becomes an operating system applied throughout the organization.
4. Termination by starvation – starving the project from support until no one cares about it.

There are various factors that should be considered before terminating a project. Some of the key questions to be asked are:

- Is the project still consistent with the organizational goals?
- Is it practical? Is it useful?
- Is Management still supporting its implementation?
- Are there resources availability to finish the project?
- Is the project team enthusiastic about the project?
- Does the organization have the required skills?
- Has the project been impacted by new technology, information etc.?
- Does the project have the support of all departments?
- Is the output of the project still cost effective?
- Are there better alternative uses for the funds?
Once it has been decided to terminate a project, for whatever reason, the project manager must go through a termination process. This process involves the following stages:

- Make sure no new expenditure is incurred
- Review all supplier contracts and invoices
- Inform all project staff about the termination of project
- In big projects, there may be need to appoint a termination manager while the PM goes back to the ‘home’ office
- Provide a checklist for termination
- Give the client information about the project output
- Provide evidence that the project has been completed in a proper manner
- Provide a basis for assessment
- Provide information for future projects (baseline)

7. PROJECT EVALUATION

The project has been terminated, so what next? For a project with a long period of implementation, there is always a mid-term review in the middle of the implementation phase that forms part of a status report.

Project evaluation is an objectively systematic assessment of a completed project or programme (or a phase of an on-going project or programme that has been completed). The data so collected helps to make strategic decisions about a project for the purpose of improving its future performance. According to Dale (1998) it is a more thorough examination than the monitoring, at specified times, of programs, projects or organizational performance, usually with an emphasis on the impact for people, relevance, effectiveness, efficiency, sustainability, and replication. During the monitoring process, the information collected provides the basis for the evaluative analysis.

At the end of the project, there is a final evaluation whose objectives are:

- To determine if the project was relevant to the beneficiaries as indicated during the planning phase.
- To determine if the outputs were produced and their impact on the beneficiaries.
- To determine what lesson we can learn for future projects.
- To mandate for re-funding.
- To justify the program or project.
- For the improvement of the program.
- To determine the efficiency, effectiveness and impact of the program.

7.1. WHY SHOULD PROJECTS BE EVALUATED?

Project evaluation has several benefits for the project stakeholders, some of which are:-

1. Benefits for Sponsors and staff
   a. What did the sponsor get for his money?
   b. What was the value and impact of their money?
   c. Professional Development for staff
   d. Helps staff to know definitions, potentials and limitations of the evaluation
   e. Helps staff to select appropriate standards, indicators, evidence and resources
2. Opportunities
   a. To identify new audiences and applications for a program
   b. To provide diagnostic data for future improvements

3. Understanding Outcomes
   a. Increased knowledge of outcomes
   b. Determine the effectiveness of the action/intervention
   c. Knowledge of impact on the audience
   d. Improved relationship with stakeholders
   e. Provide accountability to funders
   f. Decision-making (planning and policy making)

The following table shows some of the issues that the project may consider for evaluation.

<table>
<thead>
<tr>
<th>Monetary</th>
<th>Non-Monetary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased number of IGAs</td>
<td>More area under local community management</td>
</tr>
<tr>
<td>Income per person</td>
<td>More people participating in beekeeping</td>
</tr>
<tr>
<td>Change in asset value</td>
<td>Healthier community</td>
</tr>
<tr>
<td>Number of jobs created</td>
<td>Improved food security</td>
</tr>
<tr>
<td>Rate of poverty reduced</td>
<td>Improved forest management</td>
</tr>
</tbody>
</table>

Photo: (CC BY-SA 2.0) Bob Peterson, 6561705789_039dcfe32_o.jpg
CHAPTER 3: RESULTS BASED MANAGEMENT

Like most planning frameworks, the Results Based Management (RBM) is a project management tool that focuses on the project results, with periodic monitoring and evaluation being part of the model for effective decision-making.

8. WHAT IS RBM?

“Results-based management is a management strategy by which all actors on the ground, contributing directly or indirectly to achieving a set of development results, ensure that their processes, products, and services contribute to the achievement of desired results (outputs, outcomes, and goals). RBM rests on clearly defined accountability for results and requires monitoring and self-assessment of progress towards results, including reporting on performance.” RBM has three salient points that should be considered before it is applied, and these are:

a. Accountability – project resources must be accounted for in the interest of national development, as the government serves as the primary owner and executing agent of projects and is accountable to its citizens, parliament and other institutions. This included non-profit sector/NGOs. The accountability issue goes beyond governments, as the UN system is also accountable to funding agencies and governments with a purpose of meeting national development programs. A stakeholder that plays the role of an implementing agent is equally accountable for the project’s outputs. In addition, suppliers and contractors are inputs to the project and are accountable to the implementing agents for the satisfactory delivery of services.

b. National ownership – all UN programs are meant to support the national programs of the host country. In view of this, all the stakeholders must be engaged at every level of the project, from design to evaluation.

c. Inclusiveness – one other feature of RBM is its support for the inclusiveness of the government, social partners, minorities, indigenous people, civil society and direct beneficiaries. This inclusiveness contributes to the project’s success if all the stakeholders are included at all the stages of the project.

9. WHAT IS A RESULT?

“A result is a describable or measurable change in state that is derived from a cause and-effect relationship.” A development intervention generates outputs, outcomes, and impact. It is these that result in change. This change can be intended, unintended or positive and/or negative. It is not always that, although desirable, an intervention can bring about positive change. Change can lead to unintended consequences or impact.

2.– UNDG (2010), Results-Based Management Handbook
10. DEVELOPING AN RBM MODEL

The designing the RBM is recommended at the project-planning phase. It is necessary at this stage to avoid redundancy during the project implementation phase. During the later stage, the project input and activities produce results (outputs, outcomes, impact). In developing Result Based Management, there are steps that will need to be taken, and these are listed below:

- Understand the project scope of work
- Data collection
- Re-state the objectives
- Determine measurable outcomes
- Determine performance indicators
- Determine project performance
- Determine what lessons were learnt

Figure 2: The RBM life-cycle approach

10.1. THE RBM PROCESS

Objective: To train 200 beekeepers in Choma from January to June 2015

Target: To train 30 female beekeepers and 30 male beekeepers per month at a total cost of ZMK200,000.

Figure 3: The RBM Process

<table>
<thead>
<tr>
<th>Activities</th>
<th>Outputs</th>
<th>Outcomes</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide high quality training to TSI in beekeeping</td>
<td>ZHC provides better training to beekeepers</td>
<td>Beekeepers produce high quality products</td>
<td>Increased income for beekeepers</td>
</tr>
</tbody>
</table>

Example

1. What would be the performance indicators?
   a. Location of trainees (Choma).
   c. Number of trainees for each gender (30).
   d. Amount of money spent on training (K200,000).

2. How will the data be collected to measure performance?
   a. Primary data through field survey.
   b. Secondary data through use of training reports, monthly reports, project status reports.

3. Performance reporting- does the report show that we achieved what we planned, i.e. to train 200 beekeepers in Choma for the first six months of 2015?

4. Why did we achieve the results that have been reported?
   a. The project trained more men than women because of cultural issues as regards women in beekeeping.
   b. The number of women trained was less because most of them were busy weeding the maize fields.
   c. Maybe it is not accepted to train men and women in the same room.

5. Performance improvement- what lessons did we learn?
   a. Never conduct training during the farming season.
   b. In Choma, never combine the two genders for training in one room. It is culturally unacceptable.
Table 3: Levels in RBM

<table>
<thead>
<tr>
<th>Strategic level</th>
<th>Performance level</th>
<th>Management level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting objectives</td>
<td>Performance/implementation level</td>
<td>Management level</td>
</tr>
<tr>
<td>Setting performance targets</td>
<td>Identifying performance indicators</td>
<td>Evaluate results</td>
</tr>
<tr>
<td>Monitor results</td>
<td>Institute project improvement based on the evaluation results</td>
<td></td>
</tr>
<tr>
<td>Review for adjustment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4: An example of Result Based Management in apiculture

- **Input**
  - bee frame hives
  - honey processing equipment

- **Activities**
  - training on how to construct bee frame hives
  - HACCP

- **Output**
  - increased honey and other bee products
  - high quality honey, increased exports (revenue, volume), contribution to GDP

- **Outcome**
  - Improved forest management
  - improved quality of life

- **Impact**
  - able to meet social costs (i.e. health, education)

10.2. REASONS FOR USING THE RBM

1. Desire for continuous project performance
2. The need to show project value to beneficiaries
3. Results in better project implementation
4. Better communication – to funders about what results will need to be achieved
CHAPTER 4:  
PROJECT GOVERNANCE  
AND CONTROL

11. PROJECT GOVERNANCE

The success of any project depends on how it is being managed. Good governance at an organizational level has for some time now gained attention and little is mentioned about project governance. In ranking the reasons for project failure, Garland (2009) lists decision making as number one course of project failure, followed by project governance and stakeholder management. Effective project governance underpins success and results in efficient and timely project decision making. However, project governance is a most respected affair; not many, if any, organizations have established project governance policies that define a common and structured approach to project governance.

This part of the module on project implementation discusses principles that are designed to avoid common project failures and assures the success of the same, which is applicable to both high and low risk projects.

11.1. PROJECT GOVERNANCE PRINCIPLES

**Project governance** is the management framework within which project decisions are made. Project governance is a critical element of any project since while the accountabilities and responsibilities associated with an organization’s business as usual activities are laid down in their organizational governance arrangements, seldom does an equivalent framework exist to govern the development of its capital investments (projects).

a. **Identify single point of accountability**
   Identify one person who will be accountable for the success of the project. In many cases, this is not stated or the project is placed in the wrong hands. Every project team member must know what their role is in the project and should be responsible and accountable for it. “Accountability cannot be shared – more than one person or a committee cannot be held responsible for the success of the project – or delegated”. Appointing a single point of accountability provides clarity of authority about decision-making in the project.

b. **Project governance should be the focus of service delivery**
   The project must answer the question ‘what service are we delivering’ to the customer, rather than simply ‘we are managing this project’. Always focus on service delivery.

c. **Separate project and organizational governance**
   The processes of decision making in projects are different from those of an organization, due to the different organizational line of command.

4. **Separate stakeholder management and project decision making**
   Stakeholder management and decision-making, as separate functions, must be separated. While stakeholders need to be aware of what is happening in the project
and apply whatever resources to shape the project, not everyone should be allowed to participate in each critical decision making. This is the preserve of the project team, and specifically the project manager.

12. PROJECT CONTROL

Projects are started with the aim of achieving a certain organization’s objectives. Any sub-organizations (PMOs etc.) charged with project oversight responsibilities must pay attention to project controls. Project control is the last element in project cycle management. Information about project performance is collected and compared with the desired results in order to ascertain the variances, if applicable, and where necessary to take corrective measures to bring the project back on track. In most cases, what causes of the project to go wrong are outside the planned parameters of the project management system and its environment. Control should focus on the three elements of the project; namely, the schedule, budget, and scope. Questions that may be asked during project control are:

1. Is the project delivering what it promised?
2. Is the delivery below budget?
3. Is the delivery at or below schedule?

12.1. MONITORING

“...is the systematic and routine collection of information from projects and programmes for four main purposes:

- To learn from experiences to improve practices and activities in the future;
- To have internal and external accountability of the resources used and the results obtained;
- To take informed decisions on the future of the initiative;
- To promote empowerment of beneficiaries of the initiative.

Monitoring is a periodically recurring task already beginning in the planning stage of a project or programme. Monitoring allows results, processes, and experiences to be documented and used as a basis to steer decision-making and learning processes. Monitoring is checking progress against plans. The data acquired through monitoring is used for evaluation”.

12.1.1. Why should projects be monitored?

Once projects have been designed and executed, it is necessary to check on the health of the project. This helps to determine if the project is achieving what was planned for in the objectives. Project monitoring is the frequent routine generation of and reporting of information about the performance of a program or project, compared with its project plan with a view of applying corrective measures. The information generated should be able to provide a basis for taking corrective measures if the project is not on course.

Any monitoring system has features such as:

- Continuous or regular
- Internally done by staff or outsiders and beneficiaries
- Covers finance, quality of input and output and actors
- May include assessment of direct changes brought by the project
- Current assessment of external environmental related to, and influencing the performance of the project
12.1.2. Purposes of monitoring

Monitoring is checking on the progression of project activities. It is a purposeful observation. It also involves giving feedback on the progress of the project-to-project sponsors, beneficiaries, and implementers. It is vital for recipients of aid at community level, district and sometimes at national level. The purposes of project monitoring are:

- Assessing the performance of a program or project (e.g. is the training of local communities on climate-smart agriculture on course.)
- Analysing organizational performance (does the organization have the necessary capacity to deliver according to the project proposal?)
- Analyses information and the situation in the community about the project
- Determines the effective use of resources in the project
- Ensures that project activities are being carried out by the right people and on time to have the project completed as scheduled and within the budget
- Helps to provide the experience learnt in one project for use in another
- Examining features and processes in the environment of an organization or scheme

Monitoring at community level involves the following:

- Identifying the project (which has already been done in this case)
- Identify team members to spearhead the monitoring
- Designing a work plan that will guide the monitoring
- Determine indicators for monitoring through the use of project objectives
- Compare planned against the actual on the ground
- Document the reasons for variances

Table 4 and table 5 indicate how the budgeted schedule and cost are translated into a project status report.

**Table 4: Budgeted schedule and cost for a beekeeping project**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration (weeks)</th>
<th>Weekly cost</th>
<th>Total cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developing beekeeping training manual</td>
<td>5</td>
<td>300</td>
<td>1,500</td>
</tr>
<tr>
<td>Conducting training in HACCP</td>
<td>2</td>
<td>1,000</td>
<td>2,000</td>
</tr>
<tr>
<td>Constructing an apiary</td>
<td>3</td>
<td>800</td>
<td>2,400</td>
</tr>
</tbody>
</table>

**Table 5: Status report for a beekeeping project showing variances**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Week 5</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Activity status</td>
<td>Actual cost</td>
<td>Activity status</td>
<td>Actual cost</td>
<td>Activity status</td>
<td>Actual cost</td>
</tr>
<tr>
<td>Developing beekeeping training manual</td>
<td>Started</td>
<td>500</td>
<td>In process</td>
<td>300</td>
<td>In process</td>
<td>400</td>
</tr>
<tr>
<td>Conducting training in HACCP</td>
<td>Started</td>
<td>1,000</td>
<td>In process</td>
<td>500</td>
<td>In process</td>
<td>500</td>
</tr>
<tr>
<td>Construction of apiary</td>
<td>Started</td>
<td>800</td>
<td>In process</td>
<td>600</td>
<td>Completed</td>
<td>1,000</td>
</tr>
</tbody>
</table>

It can be seen in the tables above that activity 1 was completed below budget and on schedule, while activity 2 was supposed to be completed in the second week but was not completed until week 5, three weeks beyond the schedule but within budget. Activity 3 was completed in week 3 and under budget.
CHAPTER 5: PROPOSAL WRITING

This section deals with the process of creating, and contents of, a winnable proposal. Proposal writing comes during the planning phase of the project. Once this step is over, the next stage is to translate the ideas on paper in a formal way. Proposal writing requires skills which can be developed with practice and training.

A proposal plays the following roles:

a. It addresses the statement of needs being addressed.
b. It provides information on the description of the project activities, timeline, resources required, and the budget.
c. It is a tool for decision making for the project manager and her project team during the life of the project.
d. It is a document for reference by management for control purposes.
e. It provides training for new project team members.
f. It is used for soliciting funds.
g. It provides a basis for the project charter.

Not everyone has the ability to write a proposal. However, training such as this one will help to impart the required skills. The following are some ingredients for good proposal writing.

a. Determine whether it will be written by one person or by a proposal development team.
b. Collect useful data needed in the needs/problem statement.
c. Establish a schedule for writing the proposal, unless it is a Request For Proposal (RFP) where there is a deadline.
d. Know the outline of the proposal sections.
e. Write easier sections first.
f. Give yourself regular breaks to refresh ideas and get some energy.

Use of statistics

It is safe to say that every situation has statistics that can be used for project development. For example, “According to the CSO (2010) 49% of the population in Monze are females between 18 and 25 years.” The use of statistics gives credibility to the reader.

Use of phrases

It is permitted to use phrases that capture the attention of the reader. Attention grabbing phrases should be encouraged in every section of the proposal, from project identification to budgeting.
13. THE ANATOMY OF A PROJECT PROPOSAL

13.1. INTRODUCTION

Use about three to five sentences that will capture the critical state of the need or the problem to be solved. For example, “There are 5,000 beekeepers in Mwinilunga who do not have modern honey processing equipment, resulting in the loss of about 90% of income due to use of traditional methods of honey extraction”.

13.2. CURRENT PROBLEM

In this section, information is presented about the beekeepers affected by the gap in the lack of modern honey processing equipment. Discuss the pain of losing income; how bad things are and how many people are affected, the impact of business-as-usual and how the solutions being proposed will address the challenges.

13.3. PURPOSE STATEMENT

Discuss how the funds will be used and how it will affect the target group. For example, “The purpose of our application is to provide modern honey processing equipment to women beekeepers in Mwinilunga that will result in increasing their revenue by 90%”.

13.4. GOALS

Set goals for solving the problem that are full of hope, and promise the funder results. For example, “The goal of the project is to build the capacity of the honey value chain actors (beekeepers, processors, traders) in order to increase the value of traded bee products”. Goals are not meant to be measured. They are meant to give the reader an ideal situation where the TSI would want to be. Goals are reached through the accomplishment of measurable objectives.

13.5. FORMULATE PROJECT OBJECTIVES

Project objectives are the attainable and measurable activities of the project that aid in attaining the goals over the period of the project. In normal cases, they objectives should not exceed five items. Here are some examples of project objectives.

There are two types of objectives (process and outcome) that should be considered. Both are applicable in the case of the TSIs.

13.5.1. Process objectives

Process objectives describe the process or step that may be taken to accomplish the desired goals, but they do not indicate the impact of those steps on a client. “Many times process objectives are formulated because the activities involved in implementation are important to the overall understanding of how a problem or need gets addressed”. Process objectives are ideal when an organization wants to increase its knowledge in order to improve the delivery services, such as organizational interaction, to gain understanding of issues (i.e. strengthening the honey forum, or to examine extension services for difficult-to-reach beekeepers). The main thrust of process objectives is in addressing the how and not the what that is being accomplished.
13.5.2. **Outcome objectives**

This type of objective specifies the target groups and what happens to them as a result of the intervention, which is reflected by change that can be measured i.e. behaviour, skills, attitude, values/beliefs, knowledge or conditions. Well-stated outcome objectives must meet the following conditions/tests:

- What is the timeframe for service delivery?
- What is the target group of the service?
- How many people will be reached?
- What will be the results/benefits of the intervention?
- What geographical location will the project operate in?

The following example gives the reader an idea of how one goal can have different objectives.

**Goal**

To prevent traditional beekeepers from cutting trees for back hives in Monze by promoting the use of modern frame hives.

**Process objectives**

- To form a coalition of ten beekeeper associations in order to develop a comprehensive plan for providing extension services to four villages in Kabompo.
- To establish a multilingual booklet that can be used in all provinces through the use of the Forestry Department extension services.
- To develop a multi-stakeholder campaign targeted at beekeepers and honey processors in Zambezi.

**Outcome objectives**

- One hundred beekeepers to be trained on how to construct frame hives in Zambezi in one year.
- One hundred beekeepers to be trained in modern apiary management in Kabompo.
- Twenty honey processors will increase output by 50% due to beekeepers’ use of frame hives.

The goal statement provides a direction for the project but is not specific about what will be achieved. The process objectives show the major activities in the project but do not state what the impact will be. In contrast, the outcome objectives have provided specifics details about who is being targeted, and how many are to achieve what results.

### 13.6. PROJECT TIMELINE

Provide the timeline when the project will start and end.

### 13.7. INFORMATION ABOUT THE APPLICANT

Introduce the project to the funder and tell them where you are located, e.g., “TSI is a not-for-profit organization that was formed in 2000, and is located in Chavuma district of North-Western Province. With a staff of 5 people and 1,000 members, TSI builds capacity in over 200 members each year in the fields of beekeeping, honey processing and trading.”
13.8. CAPABILITY STATEMENT

The purpose of the capability statement is to establish the credibility of the organization to successfully carry out the project. It indicates the applicant’s qualifications and resource availability (human, facilities, organizational, equipment) that will support the effort.

As the proposal is being written, one should take into account the organization’s unique contribution to the community and should capture the impact of the contribution on the community. When preparing this section of the proposal, one must include the organization’s qualitative and quantitative accomplishments. The capability statement should seek to show two things: (i) the organization’s characteristics and its record of accomplishment, and (ii) how these achievements qualify it to undertake the project. Typically, the capability statement must reflect the following information:

- Mission of the organization
- Organizational resources
- Community recognition and support
- The organization’s past, current and future projects
- Organization’s strengths

14. PROJECT BUDGETING

The budget expresses the cost of running the project. There is a relationship between a budget and a project. Although one does not need to be a financial wizard to prepare a budget, it is necessary to have enough time to prepare it and to counter check the figures.

There are many organizations seeking funds. In addition, the demand for accountability, good stewardship, and justification have also been heightened.

There are three types of budgets to be considered:

14.1. LINE ITEM BUDGET

This is a budget line in which all expenditure is itemised under its appropriate headings. The costs are divided into two; the personnel costs (salaries and benefits for the staff and consultants that will work on the project) and the operating expenses (rentals, printing, supplies, transportation/communication and utilities).

For an organization that already exists, it is possible to have a project running as one of its programs, which means the organization will not budget for it as a start-up. If there are several sources of income, then such expenditure is apportioned equally. For example, a TSI may have four projects running at the same time. In this case, the charges for rent for the fifth project will not be 100%. Therefore, when budgeting for that project, only one fifth of the rent should be budgeted for. This goes for other expenditures as well. Below is an example of a simple line item budget.

<table>
<thead>
<tr>
<th>Budget description</th>
<th>Total budget requested (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>41,500</td>
</tr>
<tr>
<td>Supplies/materials</td>
<td>15,250</td>
</tr>
<tr>
<td>Communication/printing</td>
<td>7,390</td>
</tr>
<tr>
<td>Facilities (rent, utilities)</td>
<td>3,650</td>
</tr>
<tr>
<td>Equipment</td>
<td>1,650</td>
</tr>
<tr>
<td>Total project budget</td>
<td>69,445</td>
</tr>
</tbody>
</table>
14.1.1. Special caution on budgeting for personnel

Not all staff may work on the project 100% of the time. In this case, when budgeting for such staff, apportion the ratio of time for the staff when they work on such a project. Staff time is often denoted by 1.00 Full Time Equivalent (FTE), meaning that that person will work 100% of his or her time on the project. A typical budget is shown below.

### Table 7: TSI budget request

<table>
<thead>
<tr>
<th>Category</th>
<th>FTE</th>
<th>Monthly salary (US$)</th>
<th>Total budget requested (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Director</td>
<td>0.5</td>
<td>4,000</td>
<td>24,000</td>
</tr>
<tr>
<td>Project Officer</td>
<td>1.0</td>
<td>3,500</td>
<td>42,000</td>
</tr>
<tr>
<td>Beekeeper trainer</td>
<td>1.0</td>
<td>3,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Clerical/driver</td>
<td>0.75</td>
<td>1,500</td>
<td>18,000</td>
</tr>
<tr>
<td><strong>Subtotal personnel</strong></td>
<td></td>
<td><strong>120,000</strong></td>
<td></td>
</tr>
<tr>
<td>Employee benefits (30%)</td>
<td></td>
<td></td>
<td>36,000</td>
</tr>
<tr>
<td><strong>Total personnel costs</strong></td>
<td></td>
<td><strong>156,000</strong></td>
<td></td>
</tr>
<tr>
<td>Operating expenses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office supplies</td>
<td></td>
<td></td>
<td>7,500</td>
</tr>
<tr>
<td>Rentals (US$300 per month for 12 months)</td>
<td></td>
<td></td>
<td>3,600</td>
</tr>
<tr>
<td>Utilities (postage, phones courier etc.)</td>
<td></td>
<td></td>
<td>2,500</td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Communication &amp; Printing</td>
<td></td>
<td></td>
<td>3,000</td>
</tr>
<tr>
<td>Transportation mileage (UN rates US$0.25/km)</td>
<td></td>
<td></td>
<td>60,000</td>
</tr>
<tr>
<td>Meetings and conference</td>
<td></td>
<td></td>
<td>10,000</td>
</tr>
<tr>
<td>Insurance (liabilities)</td>
<td></td>
<td></td>
<td>500</td>
</tr>
<tr>
<td><strong>Total operating expenses</strong></td>
<td></td>
<td><strong>97,100</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total project budget</strong></td>
<td></td>
<td><strong>235,100</strong></td>
<td></td>
</tr>
</tbody>
</table>

14.1.2. Budget justifications

According to some funders, the budget is not complete until there is a justification that explains what each budget line represents. The following is an example.

- **Personnel**
- Executive Director (ED)
  - The ED will provide project oversight, networking and community engagement and her input is estimated at 50% (US$2,000), for a total representing 0.5% FTE of her time.
- Employee benefits have been calculated at 30% of the gross income, which includes PAYE, pensions, and insurance. (This explanation should be included for all personnel engaged in the project).
- Communication and printing – this includes phones, internet, and conference materials.
- Rentals – this is 100% and is calculated at US$ 300 per month.
- Transportation – driving to and from project sites and community meetings for an estimated 12,500 km. This cost also includes the per diem for staff, gas, and maintenance.
14.2. MATCHING FUNDS AND IN-KIND FUNDS

There are some projects that may require that an organization puts in matching funds or contributes in-kind. For instance, a funder may request that an organization meets 50-75% of the money. Alternatively, the organizations is to contribute something in-kind. The following table shows how to present an in-kind budget.

Table 8: Example of an in-kind budget

<table>
<thead>
<tr>
<th>Category</th>
<th>FTE</th>
<th>Requested amount</th>
<th>TSI in-kind contribution</th>
<th>Total budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Director</td>
<td>0.5</td>
<td>4,000</td>
<td>0</td>
<td>4,000</td>
</tr>
<tr>
<td>Project officer</td>
<td>1.00</td>
<td>3,500</td>
<td>1,500</td>
<td>2,000</td>
</tr>
<tr>
<td>Beekeeping trainer</td>
<td>1.00</td>
<td>36,000</td>
<td>0</td>
<td>36,000</td>
</tr>
<tr>
<td>Clerical/driver</td>
<td>1.00</td>
<td>18,000</td>
<td>0</td>
<td>18,000</td>
</tr>
<tr>
<td>Subtotal personnel</td>
<td></td>
<td>61,500</td>
<td></td>
<td>60,000</td>
</tr>
</tbody>
</table>

14.3. PROGRAM BUDGET

A program budget combines all the activities of an organization, as described in the table below. This may include costs for projects not related to each other.

Table 9: Program budget

<table>
<thead>
<tr>
<th>Functional budget</th>
<th>Program budget</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Objective A</td>
</tr>
<tr>
<td>Line item</td>
<td></td>
</tr>
<tr>
<td>Develop training materials</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td>10,000</td>
</tr>
<tr>
<td>Supplies</td>
<td>5,000</td>
</tr>
<tr>
<td>Printing/communication</td>
<td>3,000</td>
</tr>
<tr>
<td>Facilities (rent, utilities)</td>
<td>1,500</td>
</tr>
<tr>
<td>Equipment</td>
<td>650</td>
</tr>
<tr>
<td>Activity #1 subtotal</td>
<td>20,150</td>
</tr>
<tr>
<td>Conduct beekeeper training</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>15,000</td>
</tr>
<tr>
<td>Printing/communication</td>
<td>3,500</td>
</tr>
<tr>
<td>Facilities (rent, utilities)</td>
<td>450</td>
</tr>
<tr>
<td>Equipment</td>
<td>350</td>
</tr>
<tr>
<td>Printing/communication</td>
<td>275</td>
</tr>
<tr>
<td>Subtotal</td>
<td>19,575</td>
</tr>
<tr>
<td>Conduct honey processing training</td>
<td></td>
</tr>
<tr>
<td>Personnel</td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>8,500</td>
</tr>
<tr>
<td>Printing/communication</td>
<td>2,750</td>
</tr>
<tr>
<td>Facilities (rent, utilities)</td>
<td>945</td>
</tr>
<tr>
<td>Equipment</td>
<td>275</td>
</tr>
<tr>
<td>Subtotal</td>
<td>13,270</td>
</tr>
<tr>
<td>Total for objectives</td>
<td>39,725</td>
</tr>
<tr>
<td>Project grand total</td>
<td></td>
</tr>
</tbody>
</table>
15. MARKETING YOUR PROPOSAL

You have written your proposal and maybe you have submitted it. So, what next? Seeking funds is not an easy venture. However, while there is competition for the limited funds available, at the same time there are organizations and institutions that are looking for good proposals to which they can offer their funding. Still, before we go any further, let me explain a few misconceptions about donor funding, which we will call funding myths.

Myth #1:
Sponsors fund their needs not yours. Show that you can become a change agent. Sponsors will fund projects that will show change in society.

Myth # 2
There is no relationship between the length of the proposal and the funding possibilities.

Myth # 3
Start-up projects are easier to fund. Operating expenses support are more difficult to fund. Show sustainability after end of funding

Myth # 4
Be concerned with using flowery language. Write simply and be straightforward

Myth # 5
Pleading poverty is a poor strategy. Base your proposal on the problem that you want to solve.

15.1. GETTING FUNDED

When dealing with funding prospects, examine the issues that are important and that are a good match between your project and the funders’ interests. Some of the issues of interest in prospects are:

- Priorities – what are the funder’s priorities for funding/ women groups, youth groups?
- Geographical – in which geographical region does the funder have an interest?
- Type of support – what type of support is given e.g. conferences, projects, operation and administrative costs.
- Range of giving – how much does the funder give?
- Hook – how will the funder benefit?

Here are some strategies that you may use when seeking funds:

- Carry out research on possible funders
- Develop a fundraising plan
- Form a fund raising committee
- Understand what motivates the funder and know the fundraising landscape
- Network widely
- Cultivate the interest of possible funders
- Invite funders to a field day or such project celebrations
- Develop a list of funders with the capability and inclination to fund your project
- Say thank you.
15.1.1. Barriers to Grant Seeking

- Lack of serious research on funding agencies
- Incompatibility between funding agency priorities and yours
- Poorly designed proposals
- The fact that the project is worthy in your eyes does not mean that the funders share your passion.

15.1.2. Approaching the Funders

- Concept note (title, introduction, statement of need/rationale, organization description/expertise, project description, summary)
- Letters of inquiry
- Telephone calls
- Online inquiries
- Emails
- Personal visits
CHAPTER 6: THE PROJECT MANAGER, STAKEHOLDER ENGAGEMENT AND WHY PROJECTS FAIL

16. THE PROJECT MANAGER

In Chapter 5, we discussed project funding. Once the project has been funded, it is time to recruit a project manager (PM). The hiring of the project manager should be done well in advance of the project start date, but not so soon that he has nothing to work on. It is important for the PM to know the technical aspects and scope of the project. There are several scholars who believe the PM must be a technical person in the field he will be managing, while others think the PM need not be a technical person. Nevertheless, it is important to understand the roles and responsibilities of a PM. Whether the project manager is technical or not, his roles and responsibilities are synthesised in the following statement: “The PM is responsible for what needs to be done, when it needs to be done, and how the resources are obtained to get the job done”. The project manager’s job falls primarily into three broad areas:

1. Responsibility to the parent organization;
2. Responsibility to the project client(s);
3. Responsibility to the project team.

17. QUALIFICATIONS OF A PROJECT MANAGER

Here are some of the qualifications that a project manager needs:

1. Must have a strong technical background
2. Must be a good listener and decision-maker
3. Must be a good team player and motivator
4. Must be confident and enthusiastic
5. Must be effective at dealing with obstacles
6. Must be adept at making project goal trade-offs
7. Must be a good communicator and interpersonal skills
8. Must have good negotiation skills
9. Must have good leadership and management skills
10. Must have credibility
11. Must have the ability to handle stress
12. Must be a team builder and team player
18. HOW TO DEVELOP EFFECTIVE PROJECT TEAMS

Once the team is formed, it is cardinal to ensure that there is cohesion and enough upbeat (morale) to energise the team to complete the project to acceptable standards for the client, and on budget and on time. Developing and maintaining a team takes a lot of effort. It must be recognised that for TSLs in the apiculture in Zambia, a team may not be so large, especially if it is in-house. However, there is the possibility of forming an inter-agency project team within the honey sub-sector that involves other organisations for the purpose of addressing a common problem. For ZDA, it may involve team members coming from different divisions, which may bring with it different challenges and opportunities for project success. As a PM, you may at some point find yourself resolving team conflicts, recommending to a team member to pull out due to a lack of teamwork, or battling for resources to complete certain project activities.

18.1. STAGES IN TEAM DEVELOPMENT

After a team has been formed, it goes through certain predictable stages before unity is achieved. The earlier the team moves from one stage to the next, and finally onto the performing stage, the better for the project. The following table represents the metamorphosis of teams. The period between the stages will depend on the complexity of the project, the quality of project leadership, and the organizational politics.

Table 10: Stages in project team development

<table>
<thead>
<tr>
<th>Stages</th>
<th>defining characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forming</td>
<td>members get to know each other and develop ground rules for the project.</td>
</tr>
<tr>
<td>2. Storming</td>
<td>as team members get to know each other conflicts emerge, resisting authority, demonstrating hidden agendas, and prejudices</td>
</tr>
<tr>
<td>3. Norming</td>
<td>members agree on the ground rules and how to operate, they develop close relationships and commit to the implementation plan</td>
</tr>
<tr>
<td>4. Performing</td>
<td>team members continue to work together to accomplish project tasks.</td>
</tr>
<tr>
<td>5. Adjourning</td>
<td>this is time for project termination.</td>
</tr>
</tbody>
</table>

18.2. CHARACTERISTICS OF EFFECTIVE TEAMS

Most successful projects show some common characteristics. The list is not exhaustive, but these are present in most effective teams.

- **A clear sense of mission** – all members must accept a sense of mission for the project. A sense of mission is one predictor of success in project implementation. Once a team is formed, the team leader must share the vision and the objectives of the mission.

- **Understanding the team’s interdependencies** – each team member brings her skills to the team that may not be available to others, and each team member’s role must be respected, which calls for understanding of mutual interdependency.

- **Cohesiveness** – this is the desire of team members to remain together during the life of a project. Addressing the “what is in it for me” for each member helps to build cohesiveness.

- **Trust** – it is said that trust is earned. Trust is the level of comfort the team members have with each other. Trust is a common denominator that sets the comfort levels and is exhibited in team member’s ability to share information and address different opinions, values and attitudes, without repression or fear of criticism to lose.

3.– Adopted from Keller Graduate School of Management
19. WHY PROJECTS FAIL

We all desire that a project is successful and completed on time and within budget. Sometimes, however, a project may not be as we planned it to be. Some of the symptoms that a project is headed for failure are:

1. Additional resources used without corresponding results
2. Schedule is behind in relation to resource utilization
3. Absenteeism from meetings by key project personnel
4. Incomplete project status reports
5. Project not related to organization’s mandate
6. Lack of qualified project staff
7. Poorly budgeted activities
8. Poor project governance
9. Change of organization’s focus
10. Low motivation of project staff
11. Emphasis on technology at the expense of commercial viability
12. Lack of top management support
13. Lack of project control mechanisms
14. Improper definition of roles and responsibilities
15. Setting of artificial deadlines for the purpose of funding.
16. Lack of other key stakeholder interest

According to Joseph Weiss and Robert Wysocki (1994), the ten major causes of project failure are:

1. The project is a solution in search of a problem
2. Only the project team is interested in the project
3. No one is in charge
4. The project lacks a structure
5. The project plan lacks detail
6. The project is under-budgeted
7. Insufficient resources allocated to the project
8. The project is not tracked according to plan
9. The project team is not communicating
10. The project strays from its original plan

19.1. HOW TO BRING A PROJECT BACK ON COURSE

Once the project is out of control, try the following measures to bring it back on track:

- Re-plan
- Review the project plan
- Re-assign people without compromising costs
- Check the task dependences and their logical sequence
- Brainstorm – sit with staff and solicit for ideas
- De-scope – consider delivering less than budgeted
- List and prioritize project deliverables
- Negotiate with project sponsors about the scope
- Control change – tightly control any changes made. All projects have changes
- Rally the team around the new scope and changes to get their buy-in and support
- Communicate with everyone who needs to know about the project
20. **STAKEHOLDER ENGAGEMENT**

All projects have a constituency that has a stake in its success or failure. These stakeholders can make or break the project. In understanding stakeholders, it is necessary to classify them according to their degree of influence.

“*Never underestimate the influence of stakeholders to ruin our plans*”.

A stakeholder is any person, institution or organization that has the capacity to influence the outcome of a project or is a beneficiary of the final product of the project. In other words, anyone affected by the project. It is vitally important at the project design stage to identify the role of each project stakeholder and their expectation and how the project will communicate to each stakeholder. Some stakeholders do not take direct part in the project, but the results of the project may influence them. Identifying all the stakeholder of a project is essential, as they may influence the implementation of the project.

20.1. **STAKEHOLDER MAPPING**

This is the process of identifying the stakeholders of a project; where they are, their degree of influence and the role they may play in the life of the project. Stakeholders come at two levels: the primary stakeholder and the secondary stakeholder. The primary stakeholders are a group of people or an institution that has a direct bearing on the project. This includes project sponsors, beneficiaries, project team members, and the client(s).

There are several ways in which the project team can map the stakeholders. One of the ways is to:

- Brainstorm to identify who the project stakeholders are
- Group them according to their needs or impact on/of the project
- Define the roles and responsibilities of each stakeholder
- Remember that stakeholder roles change with time

Engage the stakeholders at an early stage in the planning process. This will ensure that they will ‘buy in-into’ the project. Always know what, when, how and why you want to communicate with the stakeholders, using the communication plan, and explain the objectives of the project, its process and end point, and its benefits/results.

Below is an example of a stakeholders mapping matrix for an apiculture project that shows different levels of stakeholders. Each project should be able to define its stakeholders and how relevant they are to the project.
Table 11: Stakeholder Mapping Matrix

<table>
<thead>
<tr>
<th>Stakeholder member</th>
<th>Stakeholder role</th>
<th>Category</th>
<th>Impact on the project</th>
<th>Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITC</td>
<td>Project sponsor</td>
<td>Primary</td>
<td>H</td>
<td>Detailed project status</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>List of deliverables</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>End of phase review</td>
</tr>
<tr>
<td>Forestry dept.</td>
<td>Provision of training material for beekeeping</td>
<td>Primary</td>
<td>H</td>
<td>Quarterly meetings</td>
</tr>
<tr>
<td>Zambia Development Agency</td>
<td>Market information, business development</td>
<td>Primary</td>
<td>H</td>
<td>Quarterly meetings</td>
</tr>
<tr>
<td>District Council</td>
<td>Licensing</td>
<td>Secondary</td>
<td>L</td>
<td>annually</td>
</tr>
<tr>
<td>OPPAZ</td>
<td>Product certification</td>
<td>Primary</td>
<td>H</td>
<td>Monthly</td>
</tr>
<tr>
<td>ZABS</td>
<td>Quality assurance</td>
<td>Secondary</td>
<td>M</td>
<td>Quarterly meetings</td>
</tr>
<tr>
<td>Traditional leadership</td>
<td>Project acceptance</td>
<td>Primary</td>
<td>H</td>
<td>Quarterly meetings</td>
</tr>
<tr>
<td>Apiculture TSIs</td>
<td>Facilitation</td>
<td>Secondary</td>
<td>M</td>
<td>Monthly, quarterly bulletins</td>
</tr>
<tr>
<td>Beekeeper Associations</td>
<td>Producers</td>
<td>Primary</td>
<td>H</td>
<td>Monthly, quarterly bulletins</td>
</tr>
</tbody>
</table>

The matrix above shows that not everyone has direct power over the project. As a forest-based enterprise, the FD will always play a key role in a beekeeping project by providing advice on the type of vegetation and forest management models in the area. Traditional chiefs, however, as custodians of most of the forests (about 60%), are a more important element of the matrix.

20.2. ENGAGING THE COMMUNITIES

When they see strangers in the area, communities are usually expectant of certain things. These maybe positive or negative. Their expectations are influenced partly by how you communicate with them and also by previous projects that have been undertaken in the community, i.e. whether these were a success or failure. It may require several meetings with the beneficiary community to explain what the project will be. Consider using some of the following strategies when engaging the communities:

- Meetings with local community leaders
- Reports to local NGOs
- Courtesy call on the traditional leadership
- Peer review meeting
- Define project activities to the stakeholders before the beginning of the project
- Communicate project indicators for easy measuring of project success
- Execute the project against project objectives
- Get stakeholder input on project design, administration, communication

Addressing the value proposition (what is in it for me?):

- What are the benefits for the stakeholder?
- Will the project reduce individual/community cost of living?
- Will the project increase individual income?
- Will the project improve the standard of living?
- Will the project contribute to long-term sustainability of the natural resources?
CHAPTER 7: PROJECT RISK MANAGEMENT

Every business or project has risks that may derail the achievement of the objectives. Some risks can easily be identified while others may be difficult to notice at project planning stage. However, every effort should be made to identify the risks and propose how to respond to them. Look at everything that will get in your way or become a potential roadblock. If it is at all possible, look at both the positive and negative sides of the project before making a commitment to it.

21. WHAT IS A RISK AND TYPES OF RISK?

A risk is defined as;

1. An occurrence that will increase the likelihood of project failure.

2. A risk is an event that may or may not happen. If it does happen, it will have unwanted consequences and will result in losses, while a constraint is a real-world limit on the possibilities for your project.

22. TYPES OF RISKS

**Known risks:** You can identify these after reviewing the project definition within the context of the technical and business environments. Use your own experience and that of your stakeholders to define such risks.

**Predictable risks:** These are risks that might occur or are anticipated based on work on other similar projects. They have to do with the economy or staff turnover and have an anticipated impact. You will be instinctively aware of these risks.

**Unpredictable risks:** The “doo-doo happens” things beyond the control of any project manager or project team.

*Project risks and constraints should be accounted for before the project gets underway.*
*Some projects should simply not happen.*
*Be careful of inheriting problem projects.*
*The impossible stays impossible, no matter how enthusiastic and motivated the project manager and the project team are.*
CHAPTER 7: PROJECT RISK MANAGEMENT

Business Risks

- Market acceptance: Will the customer buy the product?
- Time to market: Can you get the product out there before anyone else does?
- Incompatible product fit: It’s a great product, but no one can afford it.
- Difficult to sell: It’s a high-ticket item or doesn’t offer enough incentive to sell.
- Loss of support from the higher-ups: If a new manager is brought on board at a higher level, your project could lose support and funding.

Natural or man-made risks

- Your project should be insured (if possible) against:
  - Hurricanes
  - Tornadoes and Hailstorms
  - Floods
  - Earthquakes
  - Terrorism

Be aware, though, that many insurance policies have exclusionary clauses covering some of the items above.

23. RISK MANAGEMENT PROCESS

According to the PMI, “risk management is the systematic process of identifying, analysing and responding to project risk. It includes maximising the probability and consequences of positive events and minimising the probability and consequences of adverse events to the project objectives. The six steps in Risk Management Process are not independent of each other and the outcome of any step may have an impact on the outcome of other steps in the process. The existence of project activities is an indication that a risk management plan be put in place. The risk management has the following processes:

1. **Risk Management Planning** – this is a stage when the project planners decide on how to approach the risk management activities for the project.
2. **Risk Identification** – identifying the nature of the risks and documenting their characteristics. Some of the risk identification techniques are experience, brainstorming, and formation of a risk management committee. In the real world resources to deal with risk are limited. In identifying classifying the risk the following factors are helpful to the project planner:
   - Risk impact or severity on the project milestones. This can be high, medium or low.
   - Probability or likelihood of the risk. The chances that the risk factor will occur, sometimes based on faulty assumption on the availability of skills and resources. The probability risk may described as:
     - High- without mitigation it may interrupt the critical path of the project.
     - Medium- may affect the milestones or deliverables.
     - Low- no project deliverables are at risk. The medium or low. When and for how long will the risk be available? The risk is high if it will be in the next few weeks, medium if the risk will be a few months and low if the risk will not be soon.
3. **Qualitative Risk Analysis** – carrying out a qualitative assessment of the risk and prioritise them how they will affect the project.
4. **Quantitative Risk Analysis** – measuring the probability of the risk and how it will impact on the project, including an estimate of its implications in numerical terms.
5. **Risk Response Planning** – developing procedures on how to respond to the risks.
6. **Risk Monitoring and Control** – undertaking a continuous assessment of the risks during all the phases of the project.
Take the following actions to reduce impact of project risk.

1. Identify potential problems and confront them when it is cheaper and easier to do so, before there are problems and before a crisis blows up.
2. Focus on the project’s goals and consciously look for things that may affect quality throughout the project lifecycle.
3. Identify potential problems early in the planning cycle (the proactive approach) and provide input into management decisions regarding resource allocation.
4. Involve personnel at all levels of the project, focus their attention on a shared project (or product) vision, and provide a mechanism for achieving it.
5. Increase the overall chances of project success.

24. COMMON PROJECT RISKS

Below are some common project risks that may be encountered during an apiculture project:

1. **Funding:** Will you get enough money to fund your project’s needs?
2. **Time:** Things can take much longer than originally planned.
3. **Staffing:** Do you have the right staff? Do they have the right skill set and experience to meet your project’s objectives?
4. **Customer relations:** If your customer can’t or won’t work with your project team to help define the attributes of the project solution, watch out down the road.
5. **Project size and complexity:** When a project is too complex or large, it will be hard to stay within budget and get it done on time, and there will be too many factors to control. Any of them can bite you.
6. **Overall structure:** As a result of political decisions, responsibility gets split between competing groups and organizations
7. **External factors:** There are factors outside of your control, such as regulations, changing technologies, etc., that can throw your project off.
8. **Scope/change management risk**
9. **Operational risk**
10. **Financial risk**
11. **Project management risk**
12. **Strategic risk**
13. **Technology risk**
14. **Failed assumption risk**

25. RISK MITIGATION STRATEGIES

Below is a list of strategies that one may develop in order to minimise the impact of risks on a project.

- **risk acceptability** - address it if and when it comes
- **risk avoidance** - eliminate the threat or reject the an approach because its too risky.
- **risk protection** - use insurance to mitigate the risk.
- **risk research** - obtain more information about the risk.
- **risk reserve** - create contingencies in the project schedule/budget, scope in anticipation of the impact of the risk.
- **risk transfer** - transfer the risk to another entity where it has necessary authority or control.
CHAPTER 8: PROJECT TERMINATION

26. PROJECT TERMINATION

As is expected, all projects come to an end. Sometimes, the project ending is quick. In many cases, it may take a long time. While project termination may not have an impact on the project, the residual attitude that it leaves on the client, management, and project teams may affect future project management. Project termination may be stressful on team members, especially if the project was active for a long period of time. The termination process is never easy, but it is inevitable whether the project achieved its goals or not. This chapter gives the reader the conditions for terminating a project. In doing so, it will be necessary to review the evaluation results and success indicators.

According to Shtub et (1994), before a project is terminated, the following questions will need to be answered:

15. Did the organization’s goals change sufficiently so that the original project definition is inconsistent with the current goals?
16. Does management still support the project?
17. Is the project budget still consistent with the organization’s budget?
18. Are the technological, cost, and schedule risks acceptable?
19. Is the project still innovative?
20. How is the project team’s morale? Can the team finish the project successfully?
21. Is the project still cost-effective and profitable?
22. Can the project be integrated into the organization’s functional units?
23. Is the project still current, given the technology and environmental considerations?
24. Are there opportunities to use project resources elsewhere that would prove more cost effective or beneficial?

26.1. TYPES OF TERMINATION

Termination by extinction – this is when a project is stopped due to a variety of reasons, some of which are cost escalation, achieved results, external environment and corporate mergers.

Termination by addition – this is when, if the project was successful, the outputs of the project are added to the parent organization and become part of the organization; depending on the scope and size of the project, it can be added as a new division.

Termination by integration – this is common with big and complex projects. All assets are distributed among the members of the organization. The results of the project are integrated or mainstreamed and become part of the standard operating system.

Termination by starvation – this is when the resources for the project are reduced to the extent that the available resources are not able to manage the project.
26.2. THE PROJECT TERMINATION PROCESS

This section provides a guideline on the steps and process of project termination.

Project activities

- Ensure that project activities are completed
- Re-visit the project scope, charter and objectives

Documentation

- Give the customer the information of the project output
- Provide evidence that the project has been completed in a proper manner
- Provide a basis for assessment
- Provide information for future projects (baseline)

Closing down project systems

- Make sure no new expenditure is incurred
- Review all supplier contracts and invoices
- Inform all project staff about the termination of the project
- Appoint a termination manager for big projects while the PM goes back to the ‘home’ office
- Provide a checklist for termination
- Disposal of Assets such as project hardware, surplus stocks (inventory) and administration facilities (lease agreements, buildings, vehicles, phones, fax machines etc.)

Stakeholders

- Design a communication plan to disseminate about the project
- Obtain the client’s approval for termination
- Market future projects to the stakeholders

Project Reviews and Final Report

- The Final Report is the memory or history of the project. It determines the overall success and performance of the project using post-implementation audit results
- It reflects the organization and administration of the project
- Assesses the project’s strength and weaknesses
- Recommendation from the PM and project team on the continuation or extinction of the project

Rewarding Success, Learning from the Failures. The PM should budget for a celebration of the end of the journey through a final meeting, dinner, gala or party.

Figure 5 below helps to explain the process to follow when terminating a project.
**Figure 5: The process to follow when terminating a project**

<table>
<thead>
<tr>
<th>Steps</th>
<th>Termination Process</th>
<th>Phases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assign termination staff</td>
<td>Assign termination staff</td>
<td>Prepare Project termination</td>
</tr>
<tr>
<td>Close out assignment</td>
<td>Conduct a termination meeting to review process and make assignment</td>
<td>logistics</td>
</tr>
<tr>
<td>Close project office, team,</td>
<td>Prepare personnel termination reports on project team and staff. Terminate project</td>
<td></td>
</tr>
<tr>
<td>records system</td>
<td>office, reporting systems and files</td>
<td></td>
</tr>
<tr>
<td>Close financials</td>
<td>Terminate all financial documents. Complete all payments and expenses. Collect all</td>
<td></td>
</tr>
<tr>
<td></td>
<td>outstanding debts. Prepare final financial report.</td>
<td></td>
</tr>
<tr>
<td>Terminate activity and</td>
<td>Terminate work orders, contracts and assignments, manpower and outstanding supplier</td>
<td>Document the project</td>
</tr>
<tr>
<td>contracts</td>
<td>/ customer obligations</td>
<td></td>
</tr>
<tr>
<td>Document contracts</td>
<td>Document completion and compliance with all contractors, consultants, and services</td>
<td></td>
</tr>
<tr>
<td></td>
<td>purchased and received. Prepare a document file of all vendors and contracted services and products terminated</td>
<td></td>
</tr>
<tr>
<td>Close external operations</td>
<td>Close off all project sites and review all equipment off site and within umbrella</td>
<td>Conduct post-implementation</td>
</tr>
<tr>
<td></td>
<td>organization</td>
<td>audit and issue final report</td>
</tr>
<tr>
<td>Audit and final project report</td>
<td>Conduct and complete post-implementation audit of project goals, objectives and</td>
<td>and disposal of equipment</td>
</tr>
<tr>
<td>Obtain client approval</td>
<td>work activities, complete and submit final report</td>
<td></td>
</tr>
<tr>
<td>Closedown</td>
<td>Obtain client approval</td>
<td>Obtain client approval</td>
</tr>
<tr>
<td></td>
<td>Complete termination of all operations. Terminate all remaining staff</td>
<td>Close operations</td>
</tr>
</tbody>
</table>
PART II:

APICULTURE IN ZAMBIA
CHAPTER 9: INTRODUCTION TO APICULTURE OR BEEKEEPING IN ZAMBIA

27. BACKGROUND

Beekeeping is one of the old-age rural-based enterprises in which rural communities have engaged themselves in for their livelihood. Beekeeping should be differentiated from honey-hunting, where hunters collect honey from either trees or anti-hills where bees have set their colonies. In such cases, there is no management involved. On the other hand, beekeeping is a deliberate and planned activity that brings in considerable amounts of money to beekeepers and to other players in the honey value chain. Although bees generate more than honey, most people associate bees with honey. The improved demand for honey has shown the way to large-scale beekeeping practices (apiculture). Apiculture is an established income generating industry. It can be practiced on a small or on a large scale.

28. WHAT IS BEEKEEPING OR APICULTURE?

Beekeeping (or apiculture, from the Latin: *apis* meaning "bee") is the maintenance of honey bee colonies, commonly in the form of hives, by humans. A beekeeper (or apiarist) keeps bees in order to collect the honey and other products that the hive produces (including beeswax, propolis, pollen, and royal jelly), to pollinate crops, or to produce bees for sale to other beekeepers. A location where bees are kept is called an apiary or “bee yard”.

“Beekeeping is the art, science and/or business of managing honey bees in hives for the purpose of producing honey, beeswax and other hive and bee products and services for household consumption and/or sale”.

Box 1: Apiculture in the rural economy

Apiculture is an age-old cottage industry. It is the preservation of hives of honeybees for the production of honey.

Apiculture or bee-keeping is a branch of biology that deals with the rearing and maintenance of honey-bees for the production of honey on a commercial scale.

Honey is a food of high nutritive value (it contains invert sugar as it provides instant energy when consumed) and finds use in the indigenous systems of medicine as well. The honeybee also produces beeswax, which has several uses in industry, e.g. preparation of cosmetics and polishes of various kinds. Keeping beehives in crop fields can increase pollination efficiency.
Several species of honeybees can be reared. *Apis cerana indica* is a subspecies of honey bee and one of the most common species. In Zambia, the most common species is the *apis mellifera adansonii*. One of the characteristics of this species is that it is very vicious and it is known to kill its victims after stinging while it protects its colony. Apart from producing honey, bees play other roles such as in crop pollination, the maintenance of bio-diversity by pollinating flowering plants, “apitherapy” (the use of bee products for medicinal reasons) and as live fences for the prevention of wildlife from damaging crops and human dwellings.

The information in this manual is intended for the staff of TSIs in Zambia’s apiculture and for the sole purpose of helping them to understand this sub-sector. It is not intended to make them beekeepers (if they choose to become beekeepers, that is a bonus). The information in this chapter is meant to increase their appreciation for apiculture and maximizing bee products for either local or export market development. In Zambia’s rural area, beekeeping is still practiced using traditional bark-hives, and traditional beliefs and attitudes have inhibited a wide adoption of the use of modern beekeeping methods. It is estimated that Zambia produces about 3,000mt of honey per year and that its exports the commodity at a value of approximately US$600,000 per year to various countries in Europe.

**29. THE BEEKEEPING BIO-PHYSICAL OR BEE BOTANY IN ZAMBIA**

Beekeeping does not fit easily into the sectoral divides of rural development. It is an activity that spans the following:

- Forestry
- Horticulture
- Agriculture
- Entomology
- Natural environment
- Animal husbandry

Zambia’s flora sits in the Zambezi basin, which covers about 90% of the country. The Zambezi basin is characterised by four distinct types of woody vegetation, namely forests (*parinari, marquesia*, lake basin, *cryptosepalum, baiakaei, itigi, thicket, montane*, swamps and riparian), woodlands (*miombo, Kalahari, mopane, munga, termitaria*), grassland and open waters (G Kokwe, 2006). Each of these types of vegetation influence the type of pollen produced for flowering, and subsequently the color and taste of the honey. For honeybees to be productive, certain ecological variables must be present, and these are:-

- Must have plenty of trees for pollen
- Must not be very hot (otherwise heat results in bees absconding)
- Must have enough water nearby
- Must be mainly from miombo woodlands (*brachystegia, julbernadia isoberlinia, acacia, mopane*).

Most of the honey in Zambia is produced in North-Western Province (NWP), which is populated by the miombo woodlands with *brachystegia, julbernadia* and *isoberlinia* as dominant tree species. It must be remembered that the flowering of each tree species influences when honey can be harvested. The following figures show the map of Zambia with different types of vegetation.
**Figure 6:** Map of Zambia showing the distribution of Mopane Woodland in Zambia

**Figure 7:** Map of Zambia showing the distribution of Munga Woodland in Zambia
29.1. THE BEEKEEPING CALENDAR IN ZAMBIA

Honey production in Zambia is dependent on forest tree flowering. Therefore, knowing the beekeeping calendar is important for market planning and also for determining the beekeepers’ activities during the year. The miombo woodlands are by far the most significant of the vegetation as they provide opportunities for two harvesting seasons. Table 12 below shows the beekeepers’ calendar for the whole year. (Please note that due to variations in the vegetation, not all activities are performed as indicated. This calendar is just an indication of what beekeepers do during the year).

Table 12: Beekeeper’s calendar in Zambia

<table>
<thead>
<tr>
<th>Month</th>
<th>Floral and Bee Activities</th>
<th>Apiary and Other Duties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan/Feb</td>
<td>Few trees but more herbs and crops in flower</td>
<td>Hive construction and siting</td>
</tr>
<tr>
<td></td>
<td>Breeding slowly starts</td>
<td></td>
</tr>
<tr>
<td>Feb/Mar</td>
<td><em>Jubernardia</em> starts flowering</td>
<td>Cleaning and baiting of hives and swarm boxes</td>
</tr>
<tr>
<td></td>
<td>Rapid build-up and swarming</td>
<td>Transfer of swarms and unite bee colonies</td>
</tr>
<tr>
<td>Mar/Apr</td>
<td><em>Jubernardia</em> in full flower</td>
<td>General Inspection</td>
</tr>
<tr>
<td></td>
<td>Breeding slows and honey surplus stored</td>
<td>Collect data on hive occupations and prepare for cropping</td>
</tr>
<tr>
<td>May/Jun</td>
<td>Little flowering</td>
<td>Honey cropping</td>
</tr>
<tr>
<td></td>
<td>Little bee hive activity</td>
<td>Honey processing</td>
</tr>
<tr>
<td>Jun</td>
<td>Few flowers</td>
<td>Cleaning and baiting hives</td>
</tr>
<tr>
<td></td>
<td>Little bee hive activity</td>
<td>Bees wax and honey processing</td>
</tr>
<tr>
<td>July</td>
<td><em>Marquesia, Pananai and Syzygium</em> starts flowering</td>
<td>Bees wax processing and baiting and siting of hives</td>
</tr>
<tr>
<td>Aug</td>
<td><em>Brachystegia</em> in start flowering together with some of the above species</td>
<td>Transfer swarms and unite bee colonies</td>
</tr>
<tr>
<td></td>
<td>Breeding continues rapidly and swarming occurs</td>
<td></td>
</tr>
<tr>
<td>Sept/Oct</td>
<td><em>Brachystegia</em> in full flower</td>
<td>General Inspection</td>
</tr>
<tr>
<td></td>
<td>Breeding slows and honey surplus stored</td>
<td>Collect data on hive occupations and prepare for cropping</td>
</tr>
<tr>
<td>Oct/Nov</td>
<td>Few trees in flower</td>
<td>Honey cropping</td>
</tr>
<tr>
<td></td>
<td>Breeding stops and then starts again at low levels</td>
<td>Honey processing</td>
</tr>
<tr>
<td>Dec</td>
<td>Most trees have finished flowering except for herbs and crops</td>
<td>General Inspection</td>
</tr>
</tbody>
</table>

The *Jubernardia* and *Isobertina* tree species of the miombo woodlands flower between August and October for honey harvesting towards the end of the year as the main honey flow. The minor honey flow comes around May and June when the *Julbernadia paniculata* and *Julbernadia globiflora* flowers. The *Julbernadia paniculata* is well distributed in the northern parts of the country (Northern, Luapula, North-Western and Copperbelt Provinces).

It is also valuable to know that honey production is NOT a preserve of NWP, where about 60% of Zambia’s honey originates. Beekeeping can be done in other parts of the country too, even producing better honey than the one from NWP. For instance, the acassia and mopane vegetation produce good nectar and pollen for light colored honey, which is in high demand on the international market as table honey. Appendix II shows three of the most important types of vegetation (*miombo mopane and munga*) for honey production. Each of these vegetation classifications produces distinct types of honey. Although the miombo covers almost 80% of the country, there are tree species within this vegetation that flower at different times.
30. HONEY PRODUCTION TECHNOLOGIES

For the most part, especially in NWP, most beekeepers use traditional methods of beekeeping using bark hives compared to frame, clay and metal hives. In comparing honey production technologies, two prominent ones are bark and modern frame hives. Below is a comparison of the two types of hives.

Table 13: Comparison of two popular types of honey hives used in Zambia

<table>
<thead>
<tr>
<th></th>
<th>Bark hive</th>
<th>Frame hive</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Harvest about 5-7 kg</td>
<td>20-25 kg per harvest</td>
</tr>
<tr>
<td>2</td>
<td>Danger to forests</td>
<td>Friendly to forest management</td>
</tr>
<tr>
<td>3</td>
<td>Low cost investment</td>
<td>High cost investment (about K150-K400 per hive)</td>
</tr>
<tr>
<td>4</td>
<td>Normally hang on trees</td>
<td>Easy to manage in an apiary on stands</td>
</tr>
<tr>
<td>5</td>
<td>Difficulty to steal</td>
<td>Easy to steal</td>
</tr>
<tr>
<td>6</td>
<td>Difficulty to termite attack</td>
<td>Easy termite attack</td>
</tr>
<tr>
<td>7</td>
<td>A lot of wasted honey at harvesting</td>
<td>Easy to harvest</td>
</tr>
<tr>
<td>8</td>
<td>Easy to adopt by local communities</td>
<td>Local attitudes, beliefs inhibit adoption</td>
</tr>
</tbody>
</table>

30.1. HONEY PRODUCTION

As indicated in previous chapters, honey production is predominantly in NWP, where an estimated 60-80% of the honey in Zambia is produced. Other significant places are Kaoma in Western Province, Mpongwe in Copperbelt Province, Kapiri-mposhi in Central Province, Petauke and Katete in Eastern Province. In NWP, most of the honey comes from Kabompo, Kasempa, Mwinilunga, and Zambezi. Figure 7 shows the production areas in Zambia. Because of its potential to contribute to rural poverty reduction, the government of Zambia, in conjunction with SNV of Netherlands, has invested about US$2.8 million for the 3 years from 2013 to 2015 to increase honey production across the country. Figure 7 shows the project target map for this investment.
It is interesting to note that Monze in Southern Province will be one of the target areas. This project to diversify honey production from the traditional areas is welcome for three reasons:

1. Increasing honey production in areas south of Kapiri Mposhi will make the bee products more competitive, as the cost of transport will be significantly reduced since the big markets for bee products are in the middle and southern parts of Zambia.
2. The miombo woodlands vegetation (*acassia, mopane, albizia gumifera*) produces nectar and pollen for lighter colored honey, one of which is in high demand on the international market.
3. It will create a wider catchment areas where poverty can be reduced.

**Figure 9:** Honey purchases in Zambia during the 2011/2012 honey seasons by province (tonnes)
CHAPTER 10: THE BEEKEEPING SUB-SECTOR: ISSUES AND OPPORTUNITIES

31. BEE PRODUCTS AND MARKETS

31.1. BEE PRODUCTS

Other than honey and beeswax, there are additional bee products that beg for attention. The following are some that have lucrative international and local markets:

Honey
- Well known product made by bees
- Comes from the nectar of flowers
- Derives its sweetness from fructose and glucose
- Tastes sweeter than sugar
- Used in cooking, baking, or as a spread
- Used to make alcoholic beverages (imbote/ honey wine)
- Used in cosmetics and pharmaceuticals

Beeswax
- Creamy colored substance made by bees
- Priced higher than honey
- Used in making polishes, cosmetics, pharmaceutical, modeling
- Strong demand for beeswax on the world market
- The lighter the color the more valuable it is

Propolis
- A resinous mixture that bees collect from the plants
- Used to seal openings in the hives and prevents diseases from entering the hives
- Marketed as a health food and traditional medicine
- Used for relief of inflammation, viral diseases, sore throats, ulcers and superficial burns
Bee pollen

- Collected by bee workers from plant flowers and used as feed for young bees
- High content of vitamins B1-B2
- Used in medicines and food supplements
- Little or no market in Zambia
- Strong world market

Royal Jelly

- Food given to larvae of workers and drones
- About 67% water, 12.5% crude protein, 11% royal sugar
- Used as a food supplement
- Used in beauty products, claiming to rejuvenate the skin

Bee Venom

- Used in natural healing
- Used in creams, ointments, injections etc. for different ailments
- Treatment of multiple sclerosis, rheumatism and joint diseases

Bee Larvae

- Can be fried and eaten like any food
- Drone larvae are more preferred than worker larvae
- Has about 17% protein

31.2. THE MARKET FOR BEE PRODUCTS

31.2.1. Local Market

For many centuries, human beings have consumed honey and other bee products, and have used bee products for different reasons. By far, honey is the most consumed bee product. Because most of the consumption is in the production areas, such as in villages, quantifying honey production and consumption is not an easy task as most people do not keep records.

The local market for honey has been highlighted by traders who are now branding table honey as a product differentiation tool. Branding and skilful packaging has added an appeal for consumers to buy honey. Table 14 below provides some information about various local honey brands.

Table 14: Zambian Honey Brand Names

<table>
<thead>
<tr>
<th>Company’s Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Fruits</td>
<td>Zambezi Gold</td>
</tr>
<tr>
<td>Ubuchi Capital Enterprises</td>
<td>Ubuchi</td>
</tr>
<tr>
<td>WCS</td>
<td>Its Wild</td>
</tr>
<tr>
<td>Marshealres</td>
<td>Golden Star</td>
</tr>
</tbody>
</table>

*Source: Makano, 2010*
31.2.2. Export Markets

Notwithstanding record keeping, the market for honey and other bee products has been on the rise due to increased market efforts and a resurgence of honey and bee products traders. As for honey, it is mostly consumed for health reasons. Some of the drivers of honey consumption have been identified as:

1. Changes in lifestyle
2. Demand for healthy and safe products
3. Change in demographics
4. Migration from chemically induced products to more naturally grown

The export value of organic honey to the European market has averaged US$500,000 per year from 2004 to 2013 (CSO, 2014). As regards beeswax (from 2004 to 2013), annual export values have averaged US$30,000, with the exception of 2012 when the export value astronomically rose to US$174,341.

Germany is the biggest importer of honey and constitutes about 34%, followed by the UK at 16%, France at 12%, and Spain at 4%. Usually there are two types of markets for honey: the consumer market for table honey and the industrial market (bakery/confectionary and pharmaceutical/cosmetics).

Honey exports to the EU market under the Fair Trade Arrangement commands an extra price incentive above the normal price for exporters in developing countries. For example, if the landed price is €1.50 per 500 gram jar of honey, the buyer is expected to add an extra €0.50 if the exporter complies with the rules for fair trading for investing in social and environmental programs in the local community where such honey is produced. Under the Fair Trade Arrangement, honey exporters receive an extra €200-300 per ton.
31.2.3. Organic honey

One of the marketing tools that has contributed to the consumption of honey and other bee products is organic certification. As explained above, healthy eating habits are driving consumers to demand for organic or naturally grown and processed food products. Words such as ‘Organic’, ‘Natural’ or ‘Pure Honey’ appeal to the sub-conscious of the consumer to watch out for artificial products that may be harmful to their health, as a unique selling proposition.
32. THE CASE FOR DEVELOPING BEEKEEPING IN ZAMBIA

Although honey hunting and beekeeping have been practised for a long time by almost all communities in Zambia, beekeeping is now being promoted as an alternative livelihood for those people that are involved in charcoal production and illegal game hunting, and for those that want an extra income. As a cottage industry, beekeeping is well suited for people with limited resources for investment. Here are some reasons for promoting beekeeping in Zambia:

- **Contribution to the reduction of rural poverty.** According to the Central Statistics Office (2010), the incident of rural poverty in Zambia is about 80%. If well organized, beekeeping can contribute to poverty reduction as it increases people’s income.

- **Health**

  Honey production and processing in Zambia is not contaminated with chemical additives. The bees collect pollen and nectar from natural sources, making our honey more natural. The increased production of honey will contribute to good health and to pharmaceutical companies who make honey-based products from natural honey, thus increasing the incomes for processors and traders.

- **Market for honey**

  Honey and beeswax are some of the bee products that have ready markets (both local and international) that are constrained with supply.

- **Assets for beekeeping**

  The major assets for beekeeping are the least expensive. Bees, water, and plant resources for pollen are readily available for free. Beekeeping skills do not require high levels of literacy. Other resources, such as social resources from family, friends, and producer organizations, are available to support beekeepers. Since beekeeping has a good market, financing a beekeeping enterprise would not be difficult.
Box 2: Ten Excellent Reasons for Beekeeping

*Bees and their role in forest livelihoods*

1. **Pollination**
   - Bees pollinate flowering plants and thereby maintain the ecosystem.
   - Bees pollinate cultivated crops.

2. **Honey**
   - People everywhere know and like honey, a valuable food and income source.

3. **Beeswax and other products**
   - Beeswax, propolis, pollen and royal jelly. These products have many uses, and can be used to create an income.

4. **Few resources are needed**
   - Beekeeping is feasible even for people with minimal resources.
   - Bees are obtained from the wild.
   - Equipment can be made locally.
   - Bees do not need the beekeeper to feed them.

5. **Land ownership not essential**
   - Hives can be placed anywhere convenient, and so beekeeping does not use up valuable land.
   - Bees collect nectar and pollen wherever they can find it, so wild, cultivated and wasteland areas all have value for beekeeping.

6. **Nectar and pollen are otherwise not harvested**
   - Nectar and pollen are not used by other livestock: only bees harvest these resources, so there is no competition with other crops.
   - Without bees these valuable resources could not be harvested.

7. **Different sectors and trades benefit from a strong beekeeping industry**
   - Other local traders benefit by making hives and equipment, and from using and selling the products.

8. **Beekeeping encourages ecological awareness**
   - Beekeepers have a financial reason to conserve the environment: ensuring that flowers are available and bees are protected.

9. **Everybody can be a beekeeper**
   - Bees can be kept by people of all ages.
   - Bees do not need daily care and beekeeping can be done when other work allows.

10. **Beekeeping is benign**
    - Beekeeping generates income without destroying habitat.
    - Encouraging beekeeping encourages the maintenance of biodiversity.

*Source:* FAO
Figure 12 below illustrates how the beekeeping rural enterprise would fit in the DFID model.

**Figure 12: DFID’s Sustainable Livelihoods Framework (DFID, 2000 version)**

Where:

- **H** represents **human capital**: the skills, knowledge, ability to labour and good health important to the ability to pursue different livelihood strategies.

- **N** represents **natural capital**: the natural resource stocks from which resource flows useful for livelihoods are derived (for example land, water, wildlife, biodiversity, environmental resources).

- **F** represents **financial capital**: the financial resources which are available to people (whether savings, supplies of credit or regular remittances or pensions) and which provide them with different livelihood options.

- **P** represents **physical capital**: the basic infrastructure (transport, shelter, water, energy and communications) and the production equipment and means that enable people to pursue livelihoods.

- **S** represents **social capital**: the social resources (networks, membership of groups, relationships of trust, access to wider institutions of society) upon which people draw in pursuit of livelihoods.
33. BEEKEEPING SUB-SECTOR POLICY DEVELOPMENT

Policy development for any sector provides direction and later becomes a basis for legislation. As regards the beekeeping sub-sector, its development was enshrined in the National Forest Policy of 1965 which stated that “the function is to provide an extension in the beekeeping and in the production of beeswax and honey based on research and development work on beekeeping under the Zambian condition”. While the 1965 National Forest Policy highlighted the importance of beekeeping with the establishment of the Beekeeping Division, the 1998 version diminished the existence of the sub-sector as it now states beekeeping not as an objective for the development of the Forestry Department (FD), but as a strategy to address the objectives of the “forest-based industries and non-wood forest product development”. The scrapping of the Beekeeping Division and integrating it as a forest extension activity during the public sector restructuring program further weakened the impact the Division was going to have on the rural economies. As a result, beekeeping has never been center stage as a form of livelihood.

While the 1965 National Forest Policy encouraged the development of beekeeping, the current forestry policy and institutional inadequacy is not robust enough to support the development of the sub-sector. Realising this shortfall, under the auspices of the International Center for Forest Research (CIFOR), the government constituted a technical committee that has now drafted the beekeeping policy that is expected to address issues of the sub-sector.
BIBLIOGRAPHY


