german cooperation
DEUTSCHE ZUSAMMENARBEIT

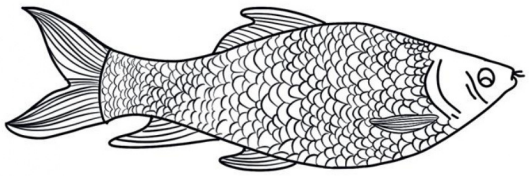
Implemented by
giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

सत्यमेव जयते
मत्स्यपालन, पशुपालन और डेयरी मंत्रालय
MINISTRY OF FISHERIES, ANIMAL HUSBANDRY AND DAIRYING

GROW MORE FISH
DEPTT. OF FISHERIES ASSAM

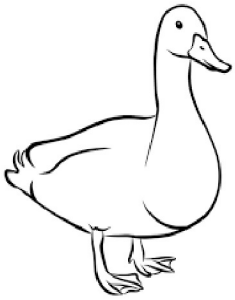
Assam State Rural Livelihoods Mission
Towards Livelihood Promotion

Sustainable Aquaculture for Food and Livelihood
SAFAL



Aquaculture Business School

Trainer's file
India



Carp, Rice, Duck

1st Edition
October 2023

Foreword

The Farmer Business School (FBS) approach has been developed for cocoa production systems in 2010 by GIZ/Sustainable Cocoa Business and local partners from Ghana, Nigeria, Côte d'Ivoire, Cameroun and Togo. Over 480,000 cocoa producers have been trained by local partners in these 5 countries with the support of the Federal Ministry of Economic Cooperation and Development of Germany (BMZ) and other donors such as Bill & Melinda Gates Foundation, World Cocoa Foundation, NIRSAL and the European Union. Since 2012, other GIZ programs as well as public and private partners have adapted FBS to other export and food commodities. The total outreach in Africa is exceeding 1,710,000 smallholders in more than 30 countries.

In 2022, the Agri-Business Facility for Africa (ABF) in collaboration with the Global Program Sustainable Fishery and Aquaculture has adapted the FBS concept specifically for aquacultural entrepreneurs. Aquaculture Business School (ABS) is building on experiences with FBS taking into consideration specific content elements for aquaculture value chain.

GIZ Sustainable Aquaculture for Food and Livelihood (SAFAL) is implementing the ABS in India, in collaboration with the Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD), Department of Fisheries (DoF), Government of Assam and the Assam Rural Livelihood Mission (ASRLM). Introducing ABS in India shall contribute to achieve the following specific objectives:

- Professionalizing aquaculture entrepreneurs for stronger business linkages with input suppliers and off-takers.
- Productivity and quality increases of aquaculture as a business.
- Improved incomes and living conditions of aquacultural entrepreneurs and their families.

The Agribusiness Facility for Africa (ABF) project of GIZ has supported the adaptation of Aquaculture Business School (ABS).

Only ABS-Trainers that underwent a special qualification program including classroom and learning trainings with farmers deliver the training in line with the principles of adult and discovery learning and the quality standards of ABS.

Contents

Eleven steps for good ABS-Groundwork before training

1. Visit the community at least one week before the training shall take place

2. Contact village authorities

3. Meet them and give an overview of ABS contents and timeline (see page 5)

4. Inform on the organizers of this training.

   These are your organization or enterprise with support from the GIZ Sustainable Aquaculture for Food and Livelihood (SAFAL) project and the Agribusiness Facility for Africa (ABF) of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ).

5. Inform on training materials that are provided free of charge.

6. Answer questions related to contents, purpose and organization.
7. Fix the date and the exact time. Punctuality and time management is crucial for a successful training!

8. Ensure the following commitments for the agreed-upon date:

   a. Constitution of a group of trainees according to the following criteria

   - Maximum 30 trainees, should produce carp, rice but also other crops.
   - Minimum one third of literate participants
   - Gender mix: Young, old, men and women
   - Participation during 5 consecutive mornings in a row must be guaranteed

   b. Organization of venue in the community

   - This can be a school, church, warehouse, cooperative meeting room or a protected place outside
   - Bench or chairs need to be organized by the community

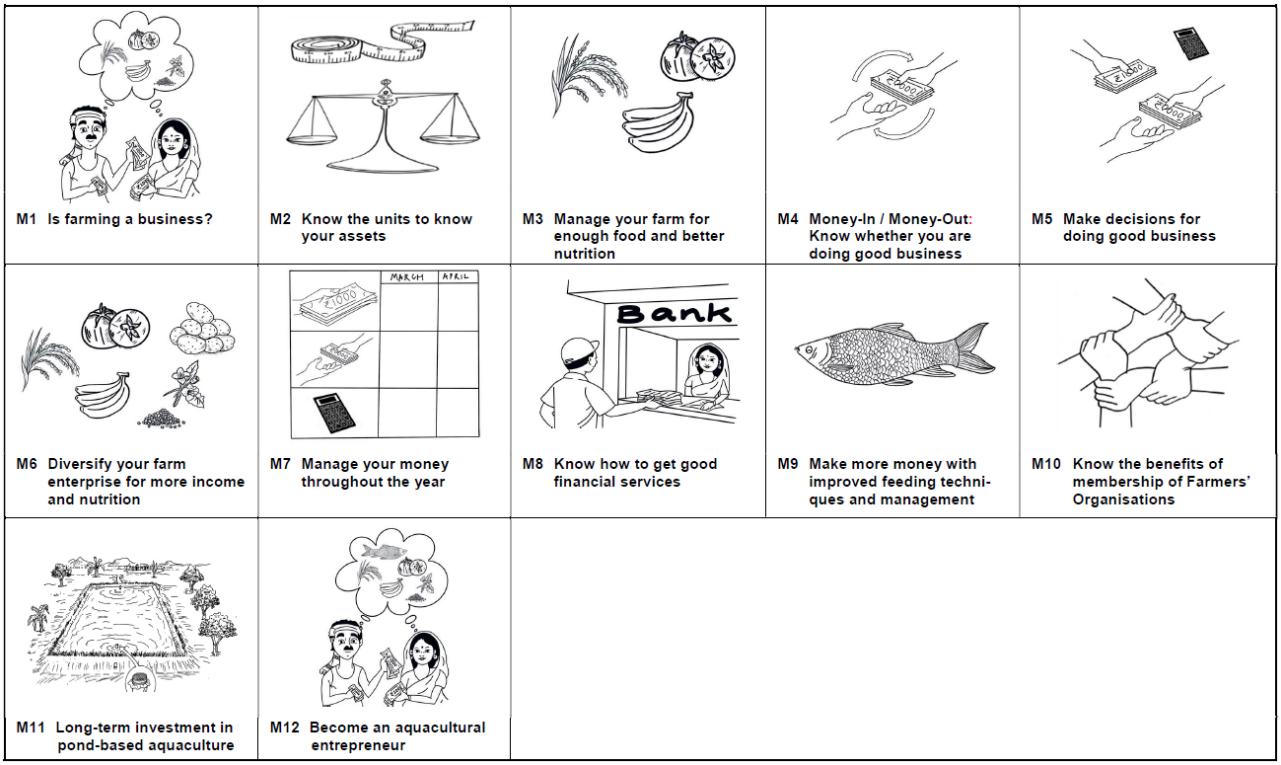
9. Communicate planning to GIZ/SAFAL (SMS) and your supervisor

10. Prepare yourself and the required training material
11. Before each training starts, print sufficient hard copies of the Annexes to facilitate the necessary monitoring

Quality criteria for the preparation, delivery and follow-up of ABS Trainings

Work plan	Each ABS trainer identifies beneficiary aquacultural entrepreneurs /farmer groups in collaboration with his superior and GIZ/SAFAL. He/she submits his/her monthly work plan latest by the 15th of the preceding month to GIZ/SAFAL Technical Advisor per text message or Email. The information on the work plan comprises: • Name of community and district • Host organization (cooperative, or others to be specified) • Starting date for training • Ending date of training
Training venues	Each ABS Trainer identifies in advance convenient training venues at community level in collaboration with representatives of the community or the ABS group.
Duration of each ABS training	Each ABS Trainer conducts each ABS training in a block of continuous five mornings. Starting (Monday to Friday) as per the designed modules; starting in the morning (08:00 am) and ending at noon (1:00 pm).
Training material	Only the standard training material, i.e. training notebook and workbook for participants and training posters procured by GIZ/SAFAL shall be used. Each ABS trainer informs GIZ/SAFAL per text message in time on the needs of training material for up-coming trainings.
Quality of delivery	ABS trainers prepare the ABS trainings properly following the guidelines of the trainer's file: The ABS trainings are to be conducted in an interactive manner, combining presentations, discussions, group work, practical exercises and role plays. The adult learning approach is respected to take advantage of male and female participants' experience and to strengthen their self-reliance
Proof of delivery	Each ABS trainers provides a list of participants and the proof of delivery signed by the focal person designated by the trained group
Follow-up of ABS trainings	Each ABS Trainer • maintains periodic contacts with ABS focal persons of groups he/she has trained • Organizes periodic meetings with ABS groups to refresh knowledge and to check the extent of adoption of tools • Identifies and reports new evolutions to his superior and to GIZ/SAFAL • Identifies and reports difficulties in the application of tools to his superior and to the Technical Advisor of GIZ/SAFAL • Makes recommendations for further improvement of the curriculum and communicates them to his superior and the Technical Advisor of GIZ/SAFAL

Schedule of ABS trainings



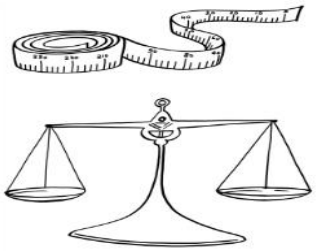
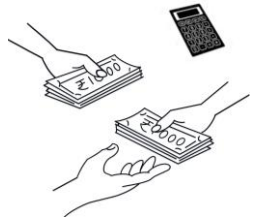
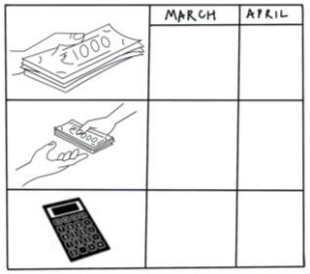
Module		Duration	Session	Morning	
0	Warming-up and presentation	40 min	1	1	Monday
1	Is Fish farming a business?	1h00	1	1	
2	Know the unit to know your assets	1h00	2	1	
3	Manage your farm for enough food	1h00	3	1	
4	Money-In / Money-Out: Know whether you are doing good business	2h00	1	2	Tuesday
5	Make decisions for doing good business	1h00	2	2	
6	Diversify your farm enterprises for more income and nutrtition	1h00	3	2	
7	Manage your money throughout the year	2h30	1	3	Wednesday
8	How to get good financial services	1h00	2	3	
9	Make more money with improved feeding techni-ques and management	1h30	1	4	Thursday
10	Know the benefits of membership of Farmers' Organisations	1h40	2	4	
11	Long-term investment in pond-based aquaculture	1h00	3	4	
12	Becoming an aquacultural entrepreneur in practice Evaluation Issuance of certificates	3h00	1	5	Friday

Module 0 Warming-up and introduction

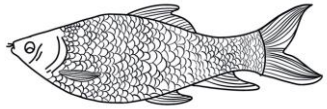
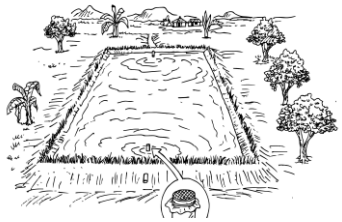
I. Trainer	Specialized ABS-Trainer
II. Time	40 minutes
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants - Know the other participants - Have an overview of the training curriculum, the schedule of training sessions and understand its purpose **Acquired Skills:** - Link individual expectations and aspirations with the training **Acquired Attitudes:** - Open dialogue about motivations and aspirations **Tools provided:** - Key questions for mutual presentation - Illustration of modules and schedule of training **Relevance for farm income** - Preparatory

V. Content, teaching method, allocated time	**Method**	**Time**
1. Constitution as a group, profile of participants and their motivation to participate	**Mutual presentation** 1: Name/village, member of coop? my farm 2: What do I want to learn in the Aquaculture Business School (expectations)?	10
2. Learning objectives and contents of the Aquaculture Business School	**Explain the modules** with the following overview of icons **Discussion**: Compare key messages with expectations	20
3. Group organization	Determine with the group the **training schedule** Session 1: 08:00 to 9:00 Break: 9:00 to 9:10 Session 2: 9:10 to 10:10 Short break : 10:10 to 10:25 Session 3 : 10:25 to 12:00 Establish with the group **rules** « Which rules do you want to follow during the training? » - Timeliness - Respect of other participants - Switch mobile phones off (or on silence) - Avoid to sleep Let the group determine - a «Master of schedule» who pays attention to the schedule and indicates the remaining time of a session (30 minutes before end of session) - «Chief of the group» who ensures discipline if necessary	10
VI. Teaching method (Summary)	Presentation of participants following lead questions Presentation of curriculum by key messages and image per message Discussions in plenary	
VII. Material	Poster with icons and key messages	
VIII. Evaluation	At the end of module 3	
IX. Bibliography, references / credits	ABS Training notebook, ABS trainers' file	

Aquaculture Business School – Overview

<table>
<tr>
<td> 
M1 Is farming a business?</td>
<td> 
M2 Know the units to know your assets</td>
<td> 
M3 Manage your farm for enough food and better nutrition</td>
<td> 
M4 Money-In / Money-Out: Know whether you are doing good business</td>
<td> 
M5 Make decisions for doing good business</td>
</tr>
<tr>
<td> 
M6 Diversify your farm enterprise for more income and nutrition</td>
<td> 

M7 Manage your money throughout the year</td>
<td> 

M8 Know how to get good financial services</td>
<td> 
M9 Make more money with improved feeding techni-ques and management</td>
<td> 
M10 Know the benefits of membership of Farmers' Organisations</td>
</tr>
<tr>
<td> 
M11 Long-term investment in pond-based aquaculture</td>
<td> 
M12 Become an aquacultural entrepreneur</td>
<td colspan="3">What are the advantages?
The skills learned in Aquaculture Business School will allow you to become a better entrepreneur who:
- Takes advantage of improved technologies and market opportunities to increase income
- Plans and adapts his production to assure food security for the family
- Targets decisions and investments in production
- Leads professional negotiations with buyers, input suppliers, credit institutions and land owners.
- Manages financial means and credit.</td>
</tr>
</table>

- page left blank intentionally -

Module 1 Is fish farming a business?

I. Trainer	Specialized ABS-Trainer
II. Time	1 h 00 min.
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants - Understand the difference and commonalities between commercial agriculture, aquaculture and other businesses - perceive the (family) farm and pond-based aquaculture as an enterprise - know basic concepts of enterprise (farm) management (objectives of the enterprise, market, price, production factors/resources of the pond and the farm; external inputs, expenditure, cost, benefit and loss) - understand the necessity of planning **Acquired Skills:** - Fill a simple cropping and aquacultural calendar **Participants know how to:** - identify requirements of aquaculture and farming as a business **Acquired Attitudes:** - Initiated self-perception as entrepreneur **Tools provided:** - Images representing the key concepts of aquaculture and farming as business and other businesses - Illustrated glossary of business terms - Simplified production calendar **Relevance for farm income** - Key concepts and terms related to aquaculture and farming as a business

V. Content, teaching method, allocated time		
No. Subject	**Method**	**Min.**
1. Farming as a business	What **examples of enterprises** do you know? Collect and list the examples provided by the participants Comparison of aquaculture and farming as a business with other businesses	15
	Objectives of the aquaculture and agricultural enterprise and key concepts a. What do you produce in your pond and farm and what do you do with these products? b. To receive these products from your pond and farm what do you need? (for farming as a business) - Production factors: land, labor (family and hired labor), money (own money and credit) - Inputs (including the difference between own inputs and purchase of inputs) - Equipment and tools - Market, knowledge of product and input prices c. What is a good business in aquaculture and agriculture - Good yields, good products, good moment of stocking of fish and planting of seeds, quality fingerlings and seeds, good prices -> sell before you produce - expenditure, cost, benefit and loss	20
3. Planning is necessary	**Cropping calendar & Aquaculture Calendar (Posters)** Discussion and progressive visualization of the cropping and aquaculture calendar - When do you start aquaculture as a business in the year? When do you start farm as business? - What is the first work you do and when? - What are the following works and when are they realized? - How do you now plan the cropping season?	25
4. Group identification	Group photo (during short break)	
VI. Training method	- Mobilization, discussion and visualization of participants' knowledge and examples following lead questions - Step wise establishment of cropping and aquaculture calendar	
VII. Materials	- Visualization material - Poster Comparison of businesses - Poster Cropping calendar rice, Poster Aquaculture Calendar	
VIII. Bibliography, references / credits	ABS-Trainer file, Training notebook, Farmer workbook, ABS posters	

Module 2 Know the units to know your assets

I. Trainer	Specialized ABS-Trainer
II. Time	1 hour
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants - know the most common measure of production factors, products, and inputs **Acquired Skills:** Participants know how to - measure a plot with simple tools - measure a pond with simple tools **Acquired Attitudes:** - Standard units and measures are important for pond-based aquaculture, farm planning, management and commercial negotiations **Tools provided:** - tape measure (Decameter) - plastic string with knot each meter - calculator - Identity card of the farm **Relevance for farm income** - measurements and units are needed for proper planning and evaluation of the enterprise

V. Content, teaching method, allocated time		
Subject	***Method***	***Min.***
1. Measuring a plot	***Introduce the use of a calculator as a tool.*** **Comparison on estimating the size of a plot** close to the place of training - Participants form 2 teams - Each team nominates two persons who will mark the corners of the plot - Each team nominates a reporter who receives a calculator and records the measurements in a book for presentation - Team 1 measures the length and width of the plot with a tape measure or decameter and calculates the area. Additionally, 1 person measures the plot size by steps (Assumption: one step = one meter) - Team 2 measures the length and width of the plot with a cord (with knots at 50 cm: explain well that 2 knots make 0.5 meter, 3 nots make 1 m, etc.!) and calculates the area. Additionally, 1 person (with different height) measures the plot size by steps (Assumption: one step = one meter)	30
	Evaluation and comparison of results Results are registered in the table provided in the poster Consequences of wrong estimates of plot size for farm management (insufficient food, insufficient income, too much or insufficient inputs bought and applied etc.) are discussed	15
2. Important measures for the agricultural enterprise	How do you measure - Land - Your products - Labor force Introduce and explain the table with standard measures and list the local units indicated by the participants	15
VI. Training method	- Group exercise on estimating a plot's size - Presentation with images and discussion in plenary	
VII. Materials	- Tools for measurement of area - Farm identity card of farm - Poster for results of measurement - Calculators	
VIII. Bibliography, references / credits	INRAB-GTZ. 2003. Farm identity card Economics of Farm management (Conversion table)	

Module 3 Manage your farm for enough food

I. Trainer	Specialized ABS-Trainer
II. Time	1 h 15 min
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** - Understand that food needs differ according to sex and age of household members - Understand that different food types have different content in major nutrients and need to be combined for a balanced and healthy nutrition **Acquired Skills:** Participants know how to - Use the food calendar - Identify supply gaps (food insecurity) and design strategies to fill food gaps **Acquired Attitudes:** - Production/provision of food for balanced nutrition requires planning. The basis for this work is dialogue within the family **Tools provided:** - Food calendar and images as part of the ABS Notebook - Posters on nutritional contents of food and food needs - Table on adaptation strategies **Relevance for livelihood** - Well nourished farm family members are healthy and can do a good job in agriculture - Expenditures for medical treatment can be avoided at least partially - Avoid expenditure for food during hunger season or season of high food prices - Enhance smallholdings' capacity to respond / adjust to food insecurity

V. Content, teaching method, allocated time		
Subject	***Method***	***Min.***
1. Food needs	**What do you eat in this region?** **What do the different food types give to you?** ➔ present poster on different food types ➔ present poster on energy, protein and fat content of foods let the participants determine the richest types of food **How much food do we need to cover our daily needs?** ➔ present and discuss the poster on daily energy and protein needs. Insist on the increased needs of boys, girls and pregnant and breastfeeding women. **How do you satisfy these needs?** ➔ Fill the food calendar with participants for production and purchase of food ➔ Identify seasons with food gaps (low availability, complementary purchase ➔ Identify whether food types required for a balanced nutrition are lacking	55
2. Manage the farm to satisfy the family's food needs	**How to have more and better food?** ➔ Referring to seasons with food gaps or requiring purchase of food (in terms of quantity and quality), discuss the table on adaptation strategies	20
VI. Training method	- Lead questions and discussion - Presentation / explanations of trainer supported by images	
VII. Materials	- Poster on types of food - Poster on nutritional contents of food and food needs - Poster on adaptation strategies - Poster Food calendar	
VIII. Bibliography, references / credits	FAO. 2004. Family Nutrition Guide	

Module 4 Money out-Money in: Know whether you are doing a good business

I. Trainer	Specialized ABS-Trainer
II. Time	2 h
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants - Know the composition of costs/expenditure and the difference between gross revenues and profit (money in & money out) - Are familiar with the concept of profit and loss (per farm enterprise and per product unit) **Acquired skills:** Participants know how to - Identify and calculate costs/expenditures (money out) and receipts (money in) - Determine profit or loss of a farm enterprise **Acquired Attitudes:** - Control and recording of money inflows and outflows is the basis for business decisions and management of money **Tools provided:** - Prepared examples of inflows-outflows for farm enterprises aquaculture, rice and duck (loss and profit) current practice of production - Prepared overviews for calculation **Relevance for farm income** - Know whether you make profit from a farm enterprise is key for business success and decisions on improvements (cost reduction, adoption and investment in improved technology, management of labor force, financial management and planning)

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Determine profit or loss for farm enterprises	**Role game**: two farmers discuss whether they have done good or bad business with fish farming during the last production season. One farmer does not know. The other knows. - Discuss why one farmer does not know whether he has done good business - What is required to determine whether you have done good or bad business in aquaculture?	20
	How to know whether you are doing good or bad business? ***Introduce the use of a calculator as a tool*** **Exercise in working groups** ➔ Present and explain one example of money out – money in (aquaculture) referring to the cropping calendar ➔ Form 3 groups (1 per farm enterprise) and provide <u>each participant</u> with calculators ➔ Each group does the calculation for one farm enterprise using the corresponding sheet in the training notebook <u>and poster. Assist the groups if needed.</u> ➔ <u>Each group designates a presenter.</u> **Presenters of working groups present and discuss their results** ➔ register results on the summary table **What farm enterprise results in loss or profit?** **What would you change?**	1h 40
VI. Teaching method (Summary)	Role game Exercises of calculation in working groups Presentation by group members and discussion	
VII. Material	Examples of calculation Calculators Poster to register results of group work	
VIII. Bibliography, references / credits	Training material of GTZ/CLP Regional meeting	

Reminder on concepts

Calculation	Explanations	Unit
Money-out (Variable Costs) **=** Cost of Inputs + Cost of Labour	The Variable Costs are the money spent on Inputs & Services and on Labour for the crop. They are called "variable" because they increase with the size of the field. If you plant 2 hectares instead of 1; the variable costs are multiplied by 2. You will need 2 times as much inputs and labour. To finance the next season an entrepreneur must save enough money to cover the "variable costs"	INR/ha
Money-in (Gross Revenue) **=** Yield x Sale Price	The Gross Revenue is the income from the sale of the crop. In case of home consumption, it is the value of the harvest if you had to purchase it. We call it Money-In in ABS.	INR/ha
Profit or loss (Gross margin) **=** Gross Revenue – Variable Costs	The Gross Margin is the benefit of using the land expressed in money terms. It indicates whether there was profit or loss. The comparison between the gross margins of different crops or agricultural production techniques helps to choose the best form of production to generate income.	INR/ha
Unit Cost = Variable Costs / Yield	The Unit Cost is the cost of producing one kilogram of product. **If the Unit Cost of producing a crop is greater than the Sale Price, it is better to simply purchase the crop. The production of the crop is only a good business if the Unit Cost of the crop produced on the farm is smaller than the Purchase Price of the crop.**	INR/kg
Explanation of Fixed Costs	Certain costs are called « fixed costs ». These are costs for equipment and tools that the farmer owns and are used on multiple crops or over multiple years, such as sprayers or irrigation pumps. The Fixed Costs do not vary with the size of the field.	INR

Left blank intentionally

Module 5 Decisions for doing good business

I. Trainer	Specialized ABS-Trainer
II. Time	1 h 00
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants - Know the composition of costs/expenditure and the difference between gross revenues and profit (money in money out) - Are familiar with the concept of profit and loss (per farm enterprise and per product unit) **Acquired Skills:** Participants know how to • Identify and calculate costs/expenditures (money-out) and receipts (money-in) • Determine profit or loss of a farm enterprise • Compare profit or loss and unit cost across crops and across production techniques • Make decisions for better business (identify new combinations of inputs, crops or technologies) **Acquired Attitudes:** • Relate business decisions to the productivity of scarce resources • Understand the income potential and investment needs of improved production techniques • Perceive aquaculture and farming as a business **Tools provided:** • Prepared examples of inflows-outflows for farm enterprises: carp, rice and duck (loss and profit and unit cost) of improved practice of production • Prepared overviews for calculation **Relevance for livelihoods** • Knowing the present income and the competitiveness of farm enterprises is necessary for decisions geared towards improved income • Unit cost is a reference for price negotiations and decisions on purchase of food or improved technologies for (food) production

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Determine profit of improved production techniques	The same **working groups** (module 4) do the calculation for one farm enterprise using the corresponding sheet on improved techniques in the training notebook and poster. They identify the techniques that constitute "better business" **Working groups present their results**. The presenters of each working group write the results in the overview posters (that will constitute the basis for module 6) **Questions for discussion**: **What do the results tell us?** **What is better business if we look at unit cost? Why?** **What is better business if we look at profit or loss?** **What would you change if this were your farm?** **What can we do with the calculation?**	1 hour
VI. Teaching method (Summary)	• Calculation of prepared examples (improved techniques) and comparison • Lead questions • Exercises in working groups	
VII. Material	• Training notebook • Poster with overview of results • Calculators	
VIII. Bibliography, references / credits	Training material from GTZ/CLP Regional expert meeting 02/2010	

Reminder on Good Aquaculture Practices only for trainers! NOT to be read during the training!!!

Fish farmers often think that stocking and feeding with rice bran improve production. However, there are many other equally or even more important key basic principles that should be followed and which contribute to higher production.

GOOD AQUACULTURE PRACTICES	
Fingerlings (Fish seed)	• Quality fingerlings (not recycled seeds) • High growth performance • Lower feed conversion ratio (FCR)-less than 1.5
Pond liming	• Improves pond soil quality • Eliminates parasites in the pond • Provides CO_2 for the photosynthetic organisms
Pond fertilization	• Organic and inorganic fertilizers can be used • Improves natural food production • Fish protection from predation-green pond acts as camouflage
Timely pond stocking	• Follow fish farming calendar when stocking the pond with the seeds • Carrying capacity of the pond and level of management determines the stocking rates. • With improved management such as pond fertilization with low quality feed e.g. rice bran: low stocking rates as 3 fish/m^2 can apply • With improved management with high quality feed: higher stocking rates as 6 fish/m^2 or more can apply
Fish feeding	• Use feeding trays for sinking feeds • Use demand feeding where you practice mixed sex stocking • Used balanced feeds for healthy and quality of the fish
Growth monitoring	• Monitor fish growth through monthly sampling (Fish traps can be used for sampling) • Make feeding adjustments where necessary
Fish harvesting	• Harvest the fish at the required time • Use fish traps (harvest intermittently) to reduce overcrowding of your pond • Harvest all your fish to minimize resources wastage
Pond maintenance	• Draining, • drying the pond, • de-silting, • weed removal, • maintaining inlets and outlets, • maintaining dike shapes.
Record keeping	• keep records such fish mortality, feed amount used/day, total production, labour etc • Helps to analyze aquaculture enterprise (financial or biological)

Left blank intentionally

Module 6 Diversifying your farm enterprises for more income throughout the year

I. Trainer	Specialized ABS-Trainer
II. Time	1 h 00 min
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants know • The opportunities for more and better distributed income and related risks **Acquired Skills:** Participants know how to • Identify opportunities and related risks using profit-loss calculation • Make decisions on the opportunities by combining them for more income **Acquired Attitudes:** • Look for opportunities, assess them and seize them • From business as usual to better business • It is possible to manage / to reduce risks (market, production) by diversifying • It is possible to assess risks with the profit or loss calculation **Tools provided:** • Overview profit or loss • Calculation based on pessimistic price and yield assumptions to assess market and production risks **Relevance for farm income** • Strategies and tools to plan intensification and income improvement (more and better distributed)

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Identify opportunities for better income from one farm enterprise	**Let's see what the best business is** *(Optimizing current business)* • Use the overview on profit or loss (carp, rice and duck, current and improved techniques) • Ranking of the farm enterprises and technique according to profit or loss • Note: Unit cost serves only for comparison of techniques for the same farm enterprise • Discuss the results and decisions the participants would make on this basis.	20
	What are other possibilities you know or practice to get income throughout the year? *(Diversification of income and market opportunities)* Participants give and explain examples from their experience (other crops or animal husbandry) **How do you know that this is good business?**	20
2. Identify and assess risks	**What risks do we face in aquaculture as a business?** **What happens with the profit if prices and production/yield go down**? **Let's calculate first!** Calculation with yields below projection (production risk) and with prices below projection (market risk) Discuss results **How probable are these risks according to your experience?** **What would you decide to avoid these risks?**	20
VI. Teaching method (Summary)	• Ranking of profit or loss • Presentation and discussion • Assessment of market and production risk using pessimistic assumptions on prices and yields	
VII. Material	• Overviews loss or profit (poster 5.2-6.1) • Calculators,	
VIII. Bibliography, references / credits	ABS-Trainer file, Training notebook, Farmer's workbook, ABS posters	

Module 7 Manage your money throughout the year

I. Trainer	Specialized ABS-trainer
II. Time	2h 30 minutes
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants • Understand the financial calendar, positive and negative monthly balances and the annual balance **Acquired Skills:** Participants know how to • Identify periods of cash deficit and surplus • Compare inflows and use figures for financial planning • How to plan expenditure of a farm and a household using the financial calendar • How to manage financial deficits • How to manage surplus money **Acquired Attitudes:** • Prudent money spending • Make savings for critical periods • Become an entrepreneur as independent as possible • Take a loan only when you are able to pay it back in time **Tools provided:** • Financial Calendar **Relevance for farm income** Planning and management of liquidity throughout the year is key for: • successful production and adoption of improved production techniques • sustainable livelihoods • re-investment of profits to take advantage of market / technology opportunities and to improve income

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Warming-up	**Role game**: It is hunger season. Two farmers discuss their financial management. One farmer has spent all his money he received from sales on unnecessary items and has trouble with his wife to finance household expenditure and to pay his children's school fees. The second farmer who has attended ABS training and spent his money wisely could take care of the household expenditure, pay his children's school fees, and has savings to buy inputs in preparation for the next farming season. **What can we learn from this story?**	30
2. Financial planning - current production techniques	**Let's see what can be done to avoid this!** **What household expenditure do you usually have?** Identify typical household expenditure with participants Use the Poster: **What can be foreseen? What is difficult to foresee?** **If we can foresee expenditure we can plan them. Let's see how we can plan expenditure!** Show, explain and discuss the financial calendar (monthly money out- money in; explain the reference case: current techniques: 1 bigha pond for carp, 1 ha of rice, 30 nos. of duck). Use the figures from module 4. Refer to the cropping calendar when the expenditures occur. ***Note: Income from sales of produce under improved should be spread at least between 3 and 6 months, this will reduce the number of months with negative under improved, while under current the income is restricted to immediately upon harvest*.** **Round 1:** Fill the poster financial calendar on current techniques together with the participants. Participants calculate the monthly balances; the trainer writes on the poster while maintaining the attention of all participants! Use red marker for deficit months! Make a small drama from the 3rd red figure onwards. Encourage participants!! This is tough work! You can make a calculation competition out of it. Let participants identify months with deficit or surplus **What do the figures of each month tell us?** Calculate the annual balance (cumulative balance) while maintaining attention now of all participants! When the picture is complete, allow some silence. **What do the figures tell us?** **How can you cover the expenditure in deficit months with surpluses from other months?** **What would you do in this situation?**	60
3. Financial planning	**Round 2:** Repeat exercise with figures for improved production techniques (module 5) Encourage participants!!!	60

Improved production techniques	Discuss results, decisions the participants would make and relevance of results for financial services (savings and credit)	
VI. Teaching method (Summary)	• Role game • Explanation of calendar • Use of financial calendar posters in plenary and discussion	
VII. Material	• 2 prepared financial calendars for current and improved production techniques • Overview on typical household expenditure	
VIII. Bibliography, references / credits	ABS-Trainer file, Training notebook, Farmer workbook, ABS posters	

Left blank intentionally

Module 8 How to get good financial services

I. Trainer	Specialized ABS-trainer
II. Time	1 hr
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants know • the meaning and importance of savings • meaning and importance of credit and different types (according to your country/region context) • Meaning and function of interest rates guaranties • The benefits of reimbursing credits • The financial service providers, their location and their conditions **Acquired Skills:** Participants know how to • Prepare for taking a credit using tools of preceding modules (e.g. gross margin, cropping and financial calendar to determine the need of credit and moment of credit availability, moment of reimbursement … • Compare conditions of financial services (rates of interest, repayment period, deposits • Obtain a guaranty for a loan • Manage the inflows to make savings and reimburse a loan **Acquired Attitudes:** Save money for future needs Take a loan only • when you need it, • when you are sure to pay it back in time from the investment Stick to the original objective of taking the credits **Tools provided:** • Financial calendar, • Information material of local financial service providers (Optional) **Relevance for farm income** • Targeted and efficient investment in aquaculture and agriculture as a business • Autonomy of aquacultural entrepreneurs

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Savings	Use the filled financial calendar (improved techniques) to determine the deficit periods (amount of money needed) and surplus periods (savings possible, amount) - calculated Discuss on this basis: • How much savings is possible for this case? • What are the appropriate moments for savings? • When might you need these savings? • In what ways can you save money, and what is the benefit? • What is happening when you save money? (you borrow money to the bank, and bank pays you an interest) Why is it important to make savings? What is an interest rate? Information on different possibilities of saving in your region	30
2. Production credit and investment in farm enterprises	Resume with financial calendar and identify the purpose, the moment and the amount of credit needed Process of obtaining a credit • **What do you need to prepare?** • **What type of credit would you choose in our example?** • **How do you manage the loan until repayment?** • **What happens when you repay a loan in time (to you, to your group, financial institution)?**	20
3. Information on available Financial Services	• Information on different possibilities and conditions of credit services in your region (time and documents needed to obtain a credit, limits of credit amounts, interest rate and repayment periods, guaranties, eventually savings deposit To be prepared for each region / country	10
VI. Teaching method (Summary)	• Lead questions • Interpretation of financial calendar improved techniques • Questions & Answers • information on local financial services and providers	
VII. Material	• Financial calendar, Gross margin Examples, Farmers' workbook • Overview on financial service providers for savings and credits	
VIII. Bibliography, references / credits	ABS-Trainer file, Training notebook, Farmer workbook, ABS posters	

Module 9 Make more money with improved feeding techniques and management

I. Trainer	Specialized ABS-trainer
II. Time	1 hr 30 min
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants refresh their knowledge about fish performance indicators e.g. • Avg. weight gain (daily) • Mortality rate • Feed conversion rate • Link between stocking rate and feed needs • Relationships between fish feeding strategy, unit costs and profit **Acquired Skills:** Participants know how to • Monitor fish pond(s) using standard indicators • Calculate performance indicators for their own fish production **Acquired Attitudes:** • Make informed decisions on fish feeding strategy based on feed costs, unit costs, profit potential and performance indicators • Monitoring fish pond(s) regularly • Implement good aquacultural techniques to maximize profit potential of chosen feeding strategy **Tools provided:** • Overview of performance indicators • Gross margin calculation for different feeding strategies **Relevance for farm income** Understanding that decision on feeding techniques has consequences on money-out, unit costs and finally profit potential. More expensive feed does not automatically translate into higher profit potential.

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Warming-up	**Role game:** Two farmers meet at the end of the fish growing season. They discuss on their fish production. One farmer used improved rice bran feed. The other farmer used imported extruded feed. Unfortunately, both have experienced losses due to theft. The farmer using rice bran feed has been regularly monitoring fish growth and adjusting the amount of feed accordingly. The farmer using extruded feed has not been monitoring the pond/weighing fish regularly, he kept on adding feed. In the end his profit was below expectation, and he still paying back some of his debt. The farmer using rice bran decide to use some of his profit to put up fence to protect the pond from future theft.	15
2. Refreshing knowledge on performance overview indicators for fish production	<u>Discussion</u> How do you decide how much fingerlings do you stock? What feed do you use? What is good quality feed? What quantity of feed and how often do you use? How do you know if your pond producing well? Why should one invest in good quality feed? What can be changed?	15
3. Exercise- Profit/loss calculation according to fish feeding strategy	Introduce the calculation exercise. Let participants calculate profit, unit costs of fish production using the example of feeding techniques with rice bran vs. imported extruded fish feed.	15
4. Conclusion	Ask participants to draw their own conclusion comparing feeding techniques (rice bran vs. imported extruded fish feed) by highlighting: costs of inputs, unit costs of production and potential profit. Conclusion for the major differences in fish feeding strategy. Understand risks related to high costs feed and potential profit. Good aquaculture entrepreneurs follow recommended techniques based on chosen fish feeding techniques.	15
VI. Teaching method (Summary)	• Presentation, Calculation exercise • Discussion • Illustrations and key messages	
VII. Material	• Poster on quality production (notebook)	
VIII. Bibliography, references / credits		

Information on FEED CONVERSION RATIO only for trainers! NOT to be read during the training!!!

The feed conversion ratio, or FCR, is a measure of how effectively fish can turn food into increased body mass. It shows how successfully fish transforms feed mass into the desired output. Knowing how effective the feed or feeding technique has been thus far is helpful to farmers.

Simply put, low FCR translates to lower feed costs. A low FCR is an excellent indicator of high-quality feed since it reflects how efficient fish consume their food. Farmers should utilize it since it produces more product with the same amount of input or feed. An FCR of between 1 and 1.5 is a reliable indicator.

For instance, if the FCR is 1, then 1 kg of feed will result in 1 kg of fish. Similarly, when the FCR exceeds 2, it indicates that 2 kg of feed produces 1 kg of fish which is an indication of poor-quality feed, poor nutritional value, poor physical quality etc.

FCR indicates:

1. The performance of feed
2. The cost effectiveness of using particular feed
3. The health of fish
4. The performance of the person who feeds the fish

FCR is normally calculated by dividing the body weight gained by the number of units of feed consumed.

FCR = Feed Eaten/fish weight gain

In order to record how much feed has been eaten by the fish, a farmer has to weigh and record the feed given to the fish and remove/deduct unconsumed feed pellets/particles from each pond at a given time after feeding.

Alternatively, the fish farmer may feed the fish at small intervals to ensure that the number of feed particles or pallets offered to fish are ingested, and then stop feeding immediately when the fish is fed ad libitum. Doing this is easy in settings with small number of fish, water transparency is adequate and you have control over feeding rate.

Module 10 Benefits from membership in farmer organizations

I. Trainer	Specialized ABS-trainer
II. Time	1 hr 40 min
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants know • Success factors of producer organization • Advantages (social economic and financial) and obligations of membership • Specific opportunities of collective business actions **Acquired Skills:** Participants know how to: • Assess a farmer based organization • Contribute to strengthen producer organization in business • Assess a cooperative business opportunity • Assess economies of scale and individual benefits of cooperative business • Use key tools to participate in decision-making **Acquired Attitudes:** • There are business opportunities that can only be seized by collective action • This has a cost to be supported by members and should provide a net benefit to member • Trust, transparency, solidarity and governance / leadership **Tools provided:** • Unit cost / unit price (with and without collective action) • Incremental value of products • Incremental income compared to fees to the producer organisation **Relevance for farm income** • Producer organisation (must) provide economies of scale and services to their member to improve market access, ensure efficient input supply and enhance value addition in marketing processing

V. Content, teaching method, allocated time		
Subject	***Method***	***Time***
1. Warming-up	**Role play (max. 10 minutes):** One strong farmer is set to pull a group of other farmers ⇒ **Tag of war** **Discuss the role play with participants:** What happened and why? **When is it useful for agricultural entrepreneurs to join efforts?** **What is a successful farmer group and a successful producer organization?**	25
2. Economic advantages of group purchase of inputs	Explain the poster on group purchase of inputs Participants calculate, you write. **What is the farmer's benefit of being member of this group?** **What do the results tell you?** **What have you learnt and what would be your decision?**	15
3. Economic advantages of group sales of products	Take up and discuss advantages **Let's see whether you we can do good business if you become member of a successful group or organization?** Explain the poster on group sales Participants calculate, you write. **What do the results tell you?** **What would you do?**	15
4. Business services	**Which services can a Farmer Organization provide to address challenges? -** Discuss business services and related tasks a Farmer Organization can provide to address challenges and opportunities	10
5. A successful Farmer Organisation	**What are the characteristics of a successful Farmer Organization?** Discuss, and ask: What are your conclusions?	20
6. Risks and their prevention	**What are risks in Farmer based organizations?** (Side-selling, diversion of inputs, non repayment of loans, non-payment of memberships fees, consequences of financial literacy **What are consequences?** **What can you do to avoid them?** Risks and rules to avoid them?	10
7. Selection of ABS Group Leadership	**Selection of ABS group leadership** - These will help in managing the group and making sure that the members meet and remind each other what they have learnt in ABS. - They should be responsible people who are well trusted.	5

	Remember to promote a good mix of selection of women, men and youth for such functions!	
VI. Teaching method (Summary)	Lead questions and discussion Examples for calculation	
VII. Material	Calculators Poster on group purchase Poster on group sales	
VIII. Bibliography, references / credits		

Reminder on group benefits only for trainers! NOT to be read during the training!!!

Benefits of Selling as a Group
• The consultation of market information helped to identify a good marketing opportunity • The leader was proactive. He took initiative to check different market opportunities and also check the exact requirements. • The farmer who sold individually regretted it in the end

Reasons for an individual farmer to not engage in group sales
• The farmer needed immediate cash • The farmer does not trust that the leaders are doing a good job in organizing group sales • He had bad experiences with previous group activities • He does not have time to take the produce to the collection point on the day of aggregation • He does not trust that other members will deliver on time • He does not trust that the buyer will really come at the agreed time and date • He does not have money to contribute to transport at the moment • He is not sure that he will really benefit in the end when he takes into account the additional costs (communication, transport, storage) and time for participating in group sales

Benefits of Group Purchase of Inputs
• Farmers can negotiate with an input provider about prices and thereby receive a better price. They have more power when they negotiate together. • The input provider offers a better price because he can sell more of his inputs at once. He does not have to make so many efforts to sell to many different farmers. • A Farmer Organization can also contact a main distributer and thereby avoid the small input provider. The main distributer can sell the inputs at a lower price. • The Farmer Organization has to take into account that they might have to organize transport and that they possibly incur communication costs. They would have to check whether organizing transport themselves is in the end more beneficial for them.

Benefits of Group Sales
• Some buyers are interested in larger volumes. They are willing to pay better prices when larger volumes are delivered in a reliable way. • A group has more negotiating power than an individual. • A group can inform itself better about different market opportunities and can achieve better prices by selling to somebody who is willing to pay more. • Higher prices can also be achieved when selling in town. It then has to be considered that transport might have to be organized and maybe storage, and that there is a certain risk involved as well. • It is relatively cheaper to transport more produce than little produce. As a group a reduced price for the transport can be negotiated with the one who is transporting.

Services which a Farmer Organization can provide - ONLY as reminder for Trainer

Challenges and Opportunities of Agricultural Entrepreneurs	Services and tasks performed by Farmer Organisation to support the agricultural entrepreneur
Accessing inputs	• Inform and help members with accessing the right inputs (e.g. certified seed) • Organise group purchasing of inputs • Sell products to members that they need (e.g. bags)
Obtaining information about good marketing opportunities	• Get in touch with buyers, find out about what their demand is and inform members (market research). • Analyse information provided by market information services • Know where and when to sell to get better prices • Discuss with potential buyers about their demand • Discuss with members different marketing opportunities and their capacity to respond to these marketing opportunities • Negotiate with buyers about prices and conditions
Obtaining quantities which reduce marketing costs and provide better prices	• Organize meetings between farmers to exchange about productivity enhancing practices • Know the quantities that buyers are interested in • Know the production capacity of members • Help farmers to increase yields • Agree with members on quantities that can be produced and sold • Organize the aggregation and the grading of produce for selling large quantities as a group

Providing quality that will pay better prices	• Know the quality that buyers are interested in, and inform the members on the quality requirements
	• Help farmers meet the quality that is required by the client, e.g. through:
	  ○ Accessing proper inputs such as seed varieties
	  ○ Grading produce to distinguish different qualities
	  ○ Packaging and storing produce properly to preserve quality
	• Agree with members on the quantities of quality produce that can be produced and marketed
	• Conduct quality control of produce to make sure that clients of group sales are satisfied and the agreed price is paid.
	• Negotiate with buyers about prices

Accessing clients that are further away	• Organise storage • Know different transport options, calculate costs of transport and organize transport
Other services	• Promote communication between members • Collect money from members to buy equipment that will benefit members jointly (e.g. a scale) • Develop or link up with existing saving groups to help members develop investment capacity • Facilitate access to financial services with other institutions (e.g. savings or loans)

Characteristics of a successful Farmer Organization- ONLY as reminder for Trainer

Sign of Success	How is it Important ?
Members are agricultural entrepreneurs	The joint business can only work when the members are business oriented
Leaders and members share a joint vision and clear business objectives. Members are able to state clear reasons for being part of the organisation.	Everybody needs to know and support the joint objectives Benefits of being a member are known and appreciated Members need to identify with the Farmer Organization The Farmer Organization offers relevant and good services to its members, e.g. providing important information or organising group purchase of inputs
The Farmer Organization has clear rules about important aspects of the organisation (e.g. through By-Laws). The rules are applied.	Members need to know what they need to contribute and what they can expect, and leaders need to know what is expected of them This is important so that everybody knows his role, and can be held accountable (leaders and members) If rules are not adhered to there are clearly defined and applied sanctions
Members pay financial contributions and fees as agreed and defined in the rules of the organisation (e.g. buying of shares, membership fees, annual contributions)	The Farmer Organization needs money to manage the joint business, and function properly, e.g.: o Costs for running services needs to be covered o Equipment needs to be maintained Members that pay their contributions regularly need to feel that others are also committed
Records are kept in a professional way.	A professional business keeps records Records are important to continuously assess performance of a business Records increase transparency and members´ trust
Leaders are selected for their capacity and commitment to lead the Farmer Organization to success. Leaders are strategic, competent, transparent and accountable.	Leaders are a key factor for the success of an FO They need to be selected very carefully based on their capacity. Competent women and youth have the same chances to become leaders as competent men. The process of selecting the leaders should be transparent to everyone
Accounts are controlled	In any professional business organisation, there is a control of accounts Control of accounts provides an incentive to leadership to keep accounts in order
Leadership produces reports regularly	Progress, achievements and challenges need to be documented Members need to be able to follow up on progress, achievements and challenges Members need to be able to assess performance of leaders
Group business growth	A clear indicator for success of a business is the increase of activities over time, e.g. tonnage production, sales volumes or expenditure, group purchasing of inputs. A successful organisation starts small and develops further over time.

Left blank intentionally

Module 11 Earning more money: Investing in fish

I. Trainer	Specialized ABS-trainer
II. Time	1 hr
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants refresh their knowledge about • Investment costs of fishpond • Items to be used for fish production, their cost and life • The evolution of production, money-inflows, and outflows, balanced cashflow and period of negative cumulated cash flow (valley of tears) **Acquired Skills:** Participants know how to • assess different options, their performance, investment and financial needs of pond establishment/repair from the economic and financial point of view **Acquired Attitudes:** • Pond establishment an investment in (the production potential of) my fish and key for more income from fish • Decision making based on economic parameters - key for investment success • Planning these investments is important for my success **Tools provided:** • Cash flow without discounting • Graphics for cash flow (including valley of tears) **Tools provided:** • This module provides tools for rational and conscious investment decision-making. • Pond establishment & investment needs are dealt with under this module

V. Content, teaching method, allocated time		
Subject	***Method***	***Minutes***
1. Warming-up	<u>Quick survey with participants:</u> Play the journalist and ask about 8 to 10 participants one **How many ponds do you have and how big are they?** **When were your ponds built?** (How old is your pond?) → register the case in age categories on the board **How often do you invest in pond repair? How much?**	15
2. Economics of pond establishment – Long-term investment	Introduce the cash flow table Introduce the multi-annual financial calendar indicating the known elements (module 5 and 7: money out for input and labor, money-in) • Introduce the new elements: fixed costs for pond-establishment (usage up to 15 years), equipment and tools (replacement every 5 years) and fish repair (replacement every 5year) Let participants: • calculate the yearly cash flow from the pond using improved rice bran and aquacultural techniques • calculate the cumulative cash flow • identify pay-back period using 15-yrs cash-flow using cumulative cash flow figures	25
3. Discuss– long-term investment in pond production	<u>Discussion</u> **What damage can we do to increase fish production?** **What are the investment needs for the pond? How often do these expenses occur?** **What happens if producers are not following good aquaculture practices?** **How can the producer know whether the investment has been paid off?** **What can be done to protect the investment in the pond?** Conclusion: Establishing new ponds needs initial investment (money-it) and it takes time to recover the costs of the investment. Following good aquacultural practices and pond monitoring is needed to ensure the investment is paid off.	20
VI. Teaching method (Summary)	• Presentation • Calculation exercise • Discussion based on excercise	
VII. Material	• Technical-financial Figures on pond cash-flow (15 years)	
VIII. Bibliography, references / credits		

Module 12 Becoming an aquacultural entrepreneur in practice

I. Trainer	Specialized ABS trainer
II. Time	3 h
III. Target group	Aquacultural entrepreneurs, smallholder farmers (male and female), land and pond owners and share croppers Farmers willing to invest
IV. Objectives	**Acquired Knowledge** Participants know • That the key tools of the ABS constitute a toolbox for decision making **Acquired Skills:** Participants know how to use the ABS tools to • Evaluate their farm enterprises and farm income • Make business and investment decisions and succeed • Identify the needs for and access to support services **Acquired Attitudes:** • I keep records to evaluate my enterprise • To seize income opportunities, I do business decisions on the basis of evaluation **Tools provided:** • ABS notebook for entrepreneurs • ABS workbook for entrepreneurs **Relevance for farm income** • Application of ABS tools will lead to more rational business and investment decisions and will enhance access to support services

V. Content, teaching method, allocated time

Subject	*Method*	*Time*
1. Introduction	What key tools have you learnt to use in the ABS? How can you use them after ABS in practice? Discussion – contributions of participants	25
2. Reminder on Notebook and overview on ABS workbook	**Reminder on Notebook** should be used to revise contents and lessons after ABS-training. **Introduction of ABS workbook** comprising the key tools for application in practice is presented and explained Questions of participants are discussed **Purpose of the workbook and overview on tools** • Identity card of farm (My enterprise) – **Insist on measured plots** • Blank financial calendar to plan money out and money in throughout the year	40

	There are five templates (i.e. one set for 1 pond or 1 plot) on cropping calendar, money-in/money-out, profit/loss and evaluation of the pond or plot. • Blank cropping calendar for planning of work to be done in one pond or on one plot. • Sheets for Profit-loss calculations per plot of the farmer • Templates to record labor and inputs, money out and money in per pond or plot • Evaluation sheet of the production year for one pond or plot • Tracking sheet for a loan 3. Contacts for orientation	
3. Evaluation and preparing for change	**Evaluation of ABS** Round 1 with individual participants: **Looking to the past 5 days what have you learnt?** **What will you change on your farm and in your household?** Round 2 with the group of participants **What will you change as a group of entrepreneurs?** **Who is your focal person to stay in contact with us? This** Selection of ABS Focal Point **- The ABS focal point should be the contact person for GIZ to get in touch, for GIZ to discuss how things are going and organize potential follow-up visits and activities (e.g. GAP if relevant).** **- He/she should be a responsible person who is well trusted and who is easily reachable through phone.** **Remember to promote a good mix of selection of women, men and youth for such functions!** Round 3 with the group of participants Explain the evaluation with the symbols ☺ 😐 ☹ on a sheet of brown paper Participants distribute ☺ 😐 or ☹ of smileys to the trainer on a brown sheet of paper that cannot be seen by the participants and the trainer. Make a surprise out of the complete results. Discuss what worked well, what needs improvement.	55
6. Graduation ceremony	Distribute the certificates	At least 30
VI. Teaching method (Summary)	• Presentation • Discussion of open questions in plenary • Demonstration • Evaluation and identification of next steps and networking	
VII. Material	• ABS workbook for entrepreneurs • Certificates • Contact forms	
VIII. Bibliography, references / credits	GIZ/Sustainable Cocoa Business. 2010. ABS-Trainers' guide, Training notebook, Farmer's workbook, ABS posters	

Reporting for monitoring and templates	**<u>Trainer and focal person after closing of ABS and before leaving the training venue</u>** **1. Finalize proof of delivery including signature by focal person** **2. Pack with list of participants and ID-cards** **3. Prepare and submit SMS-report on delivered training** comprising • Community • Political District • Start Date • End date • # male • # female • # smileys • name focal person phone focal person

Proof of delivered Aquaculture Business School Training

The ABS trainer fills the proof for each training before leaving training venue – signature of focal person and superior

Community		District	
Region		Host Org.	
Start Date		End Date	
Name of ABS Trainer			

	Men	Women
Number participants first day:		
Number participants last day:		
Smileys ☺ received from participants		

Most important changes envisaged by ABS graduates	☐ Adoption of improved feed ☐ Adoption of improved seed ☐ Bank savings ☐ Keep records ☐ Apply agrochemicals ☐ Group formation ☐ Others specify _____ _____
Complete name of Focal Person of ABS	
Phone contact of ABS focal person	
Address of ABS focal person	

I hereby certify the correct delivery of the above-mentioned Aquaculture Business School Training and the participants' degree of satisfaction

Signature of ABS focal person

Signature of superior

Annex 1 ABS Trainings - Data Collection

Proof of Delivered Aquaculture Business School (ABS) Training

Training ID:		Trainer ID:	
Name of Trainer:	First Name / Last Name	Trainers Phone Number:	
District:		Community:	
TA:		Village:	
Start Date:		End Date:	

Name of Farmer Organisation:	
Name of ABS Focal Person:	First Name / Middle Name / Last Name
Phone number of ABS Focal Person:	

	Men	Women	Total
No. of Participants on the First Day			
No. of Participants on the Second Day			
No. of Participants on the Third Day			
No. of Participants on the Fourth Day			
No. of Participants on the Fifth Day			

	Yes/No	How many Farmers?
Is there further interest by the FO on receiving more FBS Trainings?		

	M	F		M	F		M	F
No. of smileys ☺			No. indifferent, not care 😐			No. annoyed ☹		

We hereby certify the correct delivery of the above-mentioned Aquaculture Business School Training and the participants' degree of satisfaction.

Signature of Trainer	Signature of Focal Person	Signature of ABS Supervisor
Date	Date	Date

Annex 2 Attendance List Aquaculture Business School

Attendance List ABS training **Training Code:……..**

District:……. District:…… TA:…… Village:……..……

FO name:…… Trainer's name:…… Trainer's code:……..

ABS Focal Person: …… ABS Focal Person Phone Number: ……

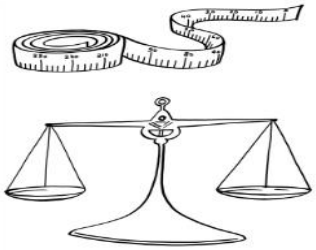
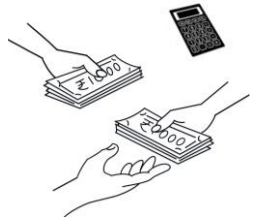
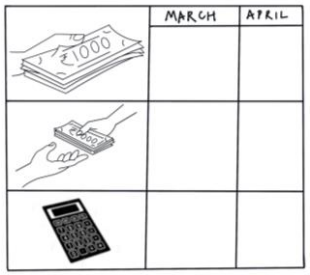
Date: from……...To……. Spot Check by: ……. Date of Spot Check: ……..

	First Name	Middle Name	Family Name	Sex	Age	Attendance per Day (Signed or Thumb)					Phone Number	Certificate Number
						Day 1	Day 2	Day 3	Day 4	Day 5		
1.												
2.												
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												

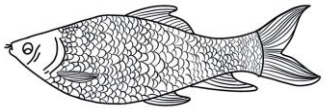
	First Name	Middle Name	Family Name	Sex	Age	Attendance per Day (Signed or Thumb)					Phone Number	Certificate Number
						Day 1	Day 2	Day 3	Day 4	Day 5		
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
20.												
21.												
22.												
23.												

	First Name	Middle Name	Family Name	Sex	Age	Attendance per Day (Signed or Thumb)					Phone Number	Certificate Number
						Day 1	Day 2	Day 3	Day 4	Day 5		
24.												
25.												
26.												
27.												
28.												
29.												
30.												
31.												
32.												
33.												
34.												
35.												

Date:

<table>
<tr>
<td> 
M1 Is farming a business?</td>
<td> 
M2 Know the units to know your assets</td>
<td> 
M3 Manage your farm for enough food and better nutrition</td>
<td> 
M4 Money-In / Money-Out: Know whether you are doing good business</td>
<td> 
M5 Make decisions for doing good business</td>
</tr>
<tr>
<td> 
M6 Diversify your farm enterprise for more income and nutrition</td>
<td> 

M7 Manage your money throughout the year</td>
<td> 

M8 Know how to get good financial services</td>
<td> 
M9 Make more money with improved feeding techniques and management</td>
<td> 
M10 Know the benefits of membership of Farmers' Organisations</td>
</tr>
<tr>
<td> 
M11 Long-term investment in pond-based aquaculture</td>
<td> 
M12 Become an aquacultural entrepreneur</td>
<td colspan="3">What are the advantages?
The skills learned in Aquaculture Business School will allow you to become a better entrepreneur who:
- Takes advantage of improved technologies and market opportunities to increase income
- Plans and adapts his production to assure food security for the family
- Targets decisions and investments in production
- Leads professional negotiations with buyers, input suppliers, credit institutions and land owners.
- Manages financial means and credit.</td>
</tr>
</table>

The Partners

The Ministry of Fisheries, Animal Husbandry and Dairying (MoFAHD) is a ministry of the Government of India for the matters related to fisheries, animal husbandry and dairying. It plays a pivotal role in formulating policies and implementing programs to promote sustainable practices, enhance animal welfare, and boost agricultural productivity in these sectors. MoFAHD is also the national lead for the the Indo-German technical cooperation project 'Sustainable Aquaculture for Food and Livelihood (SAFAL)' of German Development Co-operation (GIZ) funded by by the German Federal Ministry for Economic Cooperation and Development (BMZ).

The Department of Fisheries, Assam (DoF, Assam) operates with the motto of "Grow More Fish" and has a multi-faceted mandate. Its primary objectives include increasing fish production and the quality of fish seed in the state while optimizing available resources. The department also focuses on implementing various fishery-related schemes initiated by both the Government of Assam and the Government of India. In addition to this, it extends vital extension services to fish farmers, fishermen, and fishery entrepreneurs, contributing significantly to the growth and sustainability of the sector in Assam. DoF Assam is an implementation partner of SAFAL at state-level.

Assam State Rural Livelihoods Mission (ASRLM) focuses on stabilizing and promoting existing livelihoods portfolio of the poor through three-pronged approach. It focuses on enhancing livelihoods by expanding and improving existing income-generating options in both agricultural and non-agricultural sectors while exploring new opportunities. Additionally, ASRLM nurtures self-employment and entrepreneurship through the development of micro-enterprises, fostering economic self-sufficiency and fostering sustainable growth among marginalized communities in Assam. ASRLM is also a partner organisation for SAFAL.

SAFAL, GIZ is working towards empowering individuals and communities in business decision making through ABS in Assam in collaboration with Department of Fisheries (DoF), Assam and Assam State Rural Livelhood Mission (ASRLM) for improved income and livelihood through a tri-partite MoU. The interventions are implemented to promote aquaculture as a business along with allied activities and support farmer producer organizations to enhance production, market access and marketing of agricultural along with aquaculture produce.

Implementing partners in India:

Department of Fisheries, Assam and Assam State Rural Livelihood Mission.

Financial support for this edition

Published by	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH Registered offices Bonn and Eschborn, Germany Dag-Hammarskjöld-Weg 1-5, 65760 Eschborn, Germany GIZ- Aquaculture Value Chain for Higher Income and Food Security in India (SAFAL) www.giz.de
Authors	Annemarie Matthess
Editors	Jens Kahle, Melanie Hinderer, Dr Jeherul Islam
Contributions	Consultants for Fishery, Aquaculture, and Regional Development (COFAD), Asafu Chijere, Mbumba Chalira, Rimon Sarmah
Illustrations	James Kazembe, Priyam Kakoti Bora
As at	1st Edition October 2023 GIZ is responsible for the content of this publication.

GIZ Contacts in India
Pratap Sinha , Team Leader SAFAL, India ☎ +91 9818350864