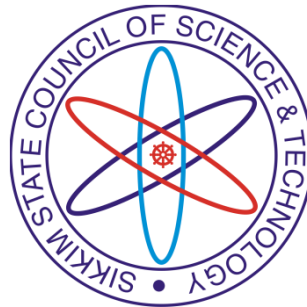


**Proposal cum Module GSDP Certificate Course titled
"Wild Beekeeping and Processing"**

ENVIS RP SIKKIM ON ECOTOURISM

GSDP-Wild Beekeeping and Processing

Proposal – cum- Module along with NSQF File



ENVIS Resource Partner Sikkim on Ecotourism, Sikkim State
Council of Science and Technology, Gangtok Sikkim
27-Aug-20



Mission: The Green Skill Development Programme on "Wild Beekeeping and Processing" is proposed to be implemented in the State of Sikkim under the aegis of the Ministry of Environment, Forest and Climate Change, Government of India to develop green skilled workers duly amalgamating scientific and traditional approach for sustainable development of rural economy.

Objective of the course: The basic aim of this GSDP course is to impart green skill training to youths and local people who have not been able to continue education due to different financial or social constraints but have an urge to learn new things and do something fruitful. The training will provide hands-on knowledge and understanding about the wild beekeeping and processing vis-à-vis ways of conservation so that it can diversify livelihood opportunities at the grassroots level through means of conservation and better understanding as an important component of farming system as well.

Aims of the course: To maintain honey bee health and productivity and explore the possibilities and considerations of how one can both profit from and contribute to the success of these amazing pollinators with a sustainable approach.

Prospects of Bee Keeping in Sikkim

For the Sikkim Himalayan region, the bees are found to be important pollinator elements and also the mediator of gene flow and the resultant transformation in local flora. Common native species of bees are *Apis cerona* subsp. *reran*^o, *A. cerono* subsp. *himoloyono*, *A. dorsato*, and *A. fotiorioso*, as well as the less noticed threatened species of stingless bees, viz.. *A. floriea* (locally known as *Kathyouree*) and *Trigono* sp. (Putka), Although *Apis mellifera*, a native of Europe has been introduced to promote bee-keeping in the Himalayan region, it has so far not outbred with or displaced the local species. The dwindling figures of bee hives and wild colonies of bees have been traced to the cause of lowering crop production in the region thought it may not be the root cause alone.

Sikkim is a Himalayan state with mountainous topography falling under the catchments of Tista and Rangit rivers which originate from glaciers or high snow areas. An altitudinal range of 300m to 8598 m within a short horizontal expanse of 120 km aerial distance forms different ecozones, e.g., from subtropical to alpine climatic zones. Sikkim has an area of 7,096 sq. km and a population of just over 6 lakh with an average density of 86 persons per km



(Census 2011). Sikkim Himalaya is endowed with an extraordinarily rich biodiversity. Variations in biogeography and changes in altitudes over short distances have combined to form a region with a great wealth of natural ecosystems. The state is regarded as a hotspot for biodiversity. It is rich in cultural diversity with distinctive ethnic groups such as the Lepchas, Bhutias., Nepalese and Limbus.

The agriculture sector in Sikkim accounts for about 60 per cent of the workforce, many of the horticultural and cash crops depend upon pollinators, Promoting conservation and management of naturally occurring insect pollinators especially the bees is very important for sustaining agricultural productivity in the long run. Issues such as decline of pollinator populations and the need to conserve them have become key issues which require timely intervention to safeguard the food security situation.

The state of Sikkim with its rich flora and bee fauna has vast potential for development of apiculture (beekeeping). Moderate climate, evergreen vegetation and horticulture development makes the state suitable for intensive development in beekeeping and also makes it a model which will highlight its **organic status** essential for the success of horticultural program in regard to its pollination potential. The hills and valleys of Sikkim are inhabited by populations of different honey-bee species of economic importance. Traditional beekeeping has been in practice in this region in log hives (gums), which provide semi-natural conditions to the bees.

In the Himalaya, native species of bee namely, *Apis cerana* subsp. *ceropa*, *A. reraria* subsp. *hirrwiayono*, *A. dorsota*, and *A. iaborioso*, are common. Among them *Apis cerarra* subsp. *reran*^o are larger in size, more productive in terms of honey and less prone to negative traits such as frequent swarming and absconding found elsewhere recently. *Apis mellifera*, a native of Europe was introduced to promote bee-keeping in the Himalayan region in the past. A large number of flowering plants require honeybees and assorted pollinators for cross-pollination to ensure a good crop. Conservation of bees is another sphere of concern in the region in terms of natural resource management.

On the marketing front, the honey fetches about 800 to 1000 rupees per litre and this brings enough incentive to a beekeeper. Honeybee finds easy passage in the local market



where the demand has always been higher than the supply. However, the average farmers do not know the pollination-fruit setting mechanism and unscientific method of beekeeping just for honey to meet the market demand is mostly exploited. At a general level, primitive cultural and processing practices are still found only in the apiary scenario. The widely accepted 1 colony: acre(or 2 colonies: 1 ha) plan is never followed because the farmer is not inclined On increasing crop yield, rather more concerned to the health and upkeep of bees for the honey. Sustainability is yet to get a meaning around the rural commune.

The unscientific beekeeping in the state is mainly due to lack of trained manpower. There is an urgent need for green skilling in this field, to impart knowledge and practice among the farmers/bee keepers about sustainable beekeeping methods. The traditional and scientific knowledge of beekeeping need to be carefully understood for holistic approach of generating livelihood vis-à-vis conserving the local bee species for ensuring better agricultural/ horticultural productivity.

Considering the epic importance of bees under the concept "No bees — No lives (on earth)" it is high time that adequate efforts through 'green skilling' should be made for its sustainable use and more importantly, for its conservation, What Einstein noted years ago, the time now has come to think seriously over it - "if the bee disappeared off the surface of the globe then man would only have four years of life left. No more bees, no more pollination, no more plants, no more animals, no more man,"



Title of the GSDP Certificate Course: Wild Beekeeping and Processing

No. of participant: 25 candidates per batch

Eligibility Criteria: No minimum qualification to X Pass/ School drop-outs/ Unemployed youths/ Farmers

Age limit: 18 years and above

Duration of Course: 1 month (25 working days – 200 hours)

NSQF- Level 4

Preliminary work

- Collection of detail information of beekeeping i.e. bee biology/life cycle) chemical properties) Indigenous Traditional Knowledge (ITK)
- Documentation, assessment and dissemination of wild beekeeping based Information and knowledge.
- Mainstreaming the training curriculum to train the selected participant.
- Detailed information on key species in the state.
- Development of Activity Guide Booklets, Resource Materials (Boucher, Posters, Digital Production etc.)

**MODULE OF WILD BEEKEEPING GSDP TRAINING PROGRAMME****NSQF- Level 4 Duration : 1 Month (200 hours)****Time: 10.00AM to 3.00 PM (Every Sunday off)**

Day	Particulars
Day 1	Registration of Trainees & Inaugural Day What is beekeeping, demand of consumer, bee products (Honey, Royal jelly, Pollen and Bee colony)
Day 2	Understanding honey bee species, life cycle and morphology
Day 3	Beekeeping equipments/ Advantage of Scientific Beekeeping over traditional beekeeping
Day 4	Bee Handling
Day 5	Colony Organisation Queen, New queen cell formation, fertilized queen/ queen mating, etc.
Day 6	Colony Capturing-Swarm colony and natural colony (practical)
Day 7	Colony division & colony united Queen less colony, control and apply of queen cell, control of worker
Day 8	Practical
Day 9	Grafting Method User of grafting method, artificial queen rearing
Day 10	Practical
Day 11	Practical
Day 12	Exposure Visit
Day 13	Honey extraction/ processing and storage, Quality control of honey
Day 14	Wax extraction/ pollen collection
Day 15	Apiary Management-Site selection, Water, shade, etc
Day 16	Bee management-Drone control, swarm control and queen control
Day 17	Seasonal Management- Dearth period, Growth period and honey flow period Bee colony migration
Day 18	Bee diseases and management
Day 19	Pollination Honey bee relation with agriculture, honey bees and pesticide poisoning
Day 20	Bee Floras and Floral Calendar
Day 21	Practical on preparation of Floral Calendar
Day 22	Opportunity, unemployment problem and beekeeping
Day 23	Knowledge on supporting agencies like SKVIB,ICAR,SISCO,NABARD etc.
Day 24	Enterprise management and marketing aspects
Day 25	Valedictory function



GREEN SKILL DEVELOPMENT PROGRAMME



Performa for the Green Skill Development Programme:

Sl. No.	Topics	Details
1.	GSDP Course conducted by	ENVIS Resource Partner Sikkim on Ecotourism Sikkim State Council of Science and Technology, Gangtok
2.	Title of the Course	Wild Bee Keeping and Processing (NSQF level- 4)
3.	Duration of the course	One Month - 200 hours
4.	No. of Students per Batch	25 Students per batch
5.	No. of Batches per Year	2 (Two)
6.	Budget per Batch	Budget per batch: Rs.17,61,500 Total Budget for 2 (two) trainings: Rs 35,23,000
7.	Fees (if proposed)	NIL
8.	Demand of the Course/Employment opportunity	<p>The programme aims to develop skillful youths who will sustainably use local natural resources to generate income for sustaining livelihood through protection and conservation practices at the grassroots level.</p> <p>The GSDP course "Wild beekeeping and processing" will generate rural livelihood opportunities through employment / self-employment of unemployed youths/ unskilled farmers into skilled beekeepers/ honey farmers, apiarists or apiculturists or become master trainers. Sikkim ENVIS RP and the host organization will collaborate with local agencies and experts to ensure proper marketing of bee products mostly highly valued medicinal honey so that the returns benefit the hard work of the skilled beekeepers.</p>
9.	Course Leaflet	It will be made in due time and distributed to relevant trainees.

NSQF QUALIFICATION FILE

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

ENVIS Centre (Resource Partner) on Ecotourism

Address: Sikkim State Council of Science and Technology hosted by Department of Science and Technology, Vigyan Bhawan, Deorali, Gangtok , East Sikkim, Sikkim. 737102

Name and contact details of individual dealing with the submission

Name: Dorjee Thinlay Bhutia

Position in the organisation: Director /Coordinator

Address if different from above: Same as above

Tel number(s): 9434188242 /9800787025 /3592-280025 (o)

E-mail address: scsts-env@nic.in / dorjitinlay@gmail.com

List of documents submitted in support of the Qualifications File

1. *Documentary Evidence of Need*
2. *Curriculum with training plan*

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers qualification**
- **Lesson Plan**
- **Distribution of training duration into theory/practical/OJT component**

NSQF QUALIFICATION FILE

SUMMARY

1	Qualification Title	Certificate course in Wild beekeeping and processing
2	Qualification Code, if any	-
3	NCO code and occupation	-
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	<p>Nature of Qualification: Wild beekeeping and processing</p> <p>Purpose of Qualification: Wild beekeeping and processing techniques includes all the honey and its product harvesting and processing techniques along with the marketing and entrepreneurship aspects. The training will provide hands on knowledge and understanding about the wild beekeeping and ways of conservation so it can be spread to the general public through them and also create job or self employment opportunities for the trainees. It will includes systematic training on harvesting, collection, processing of Wild beekeeping along with the entrepreneurs and marketing aspect viz. SKVIB ICAR, SISCO, NABARD etc..</p>
5	Body/bodies which will award the qualification	Ministry of Environment Forest & Climate Change, Government of India, Sikkim State Council of Science and Technology, Gangtok
6	Body which will accredit providers to offer courses leading to the qualification	Ministry of Environment Forest & Climate Change, Government of India
7	Whether accreditation/affiliation norms are already in place or not , if applicable (if yes, attach a copy)	Training programmes would be undertaken as part of the Green Skill Development Programme (GSDP) under the ENVIS Scheme. The courses would be run by the ENVIS Hubs (hosted by the respective State Government /UT Administration) and ENVIS Resource Partners (RPs)- (hosted by environment-related governmental and non-governmental organizations/ institutes of professional excellence) and other institutes. The assessment of the training programmes would be a regular exercise as part of the Memorandum of

NSQF QUALIFICATION FILE

		Cooperation signed with ENVIS Hubs and RPs and Memorandum of Understanding (MoU) between the ENVIS Hubs/RPs and other GSDP Partners. The courses would also be run by the Autonomous Bodies/Institutes under the Ministry for which no MoC is required.
8	Occupation(s) to which the qualification gives access	Horticultural industries, Honey Industries, National Bee Boards, Bee Research and Training institute, Self employment
9	Job description of the occupation	Beekeeper/ Beekeeping Assistant/ Honey making practitioners/ Wild Honey Bee worker/Demonstrator/Eco-friendly Entrepreneur/Trainer
10	Licensing requirements	State Level License
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	NA
12	Level of the qualification in the NSQF	Level - 4
13	Anticipated volume of training/learning required to complete the qualification	200 hours
14	Indicative list of training tools required to deliver this qualification	Mentioned in the curriculum attached
15	Entry requirements and/or recommendations and minimum age	No minimum qualification to X Pass/ Minimum age of 18 years
16	Progression from the qualification (Please show Professional and academic progression)	Master Trainer/Self-sustainable Entrepreneur.
17	Arrangements for the Recognition of Prior learning (RPL)	There is no Arrangement of RPL as of now
18	International comparability where known (research evidence to be provided)	NA
19	Date of planned review of the qualification.	March, 2020

NSQF QUALIFICATION FILE

20	Formal structure of the qualification Mandatory components		
Sl. No.	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
1	History of Beekeeping, Its economic importance (Theory)	20	4
a	Type of Bee Products (Honey, Royal jelly, pollen and Bee colony)	4	
b	Demand of consumer related to bee products.	2	
c	Wild Honey Bee species -Apis cerana subsp cerana, himalayana, Apis dorsata, Apis laboriosa, Apis mellifera and Trigona species	4	
d	Life cycle of Honey Bee	4	
e	Apis cerana indica-External Morphology and Internal Morphology, Behaviour and Ecology	4	
f	Type of Beekeeping Equipments for Wild honey bee-A. cerana	2	
2	Colony organization/ Colony capturing/ Colony division, Colony united(Theory and Practical)	20	4

NSQF QUALIFICATION FILE

a	Queen, New Queen cell formation, fertilized virgin, Queen mating, drone. etc.	6	
b	Swarm colony and Natural colony	7	
c	Queen less colony control and apply of queen cell, control of worker laying, etc.	7	
3	Bee handling and management/ Seasonal management (Theory and Practical)	20	4
a	Dearth period	5	
b	Growth period	5	
c	Honey flow period	5	
d	Seasonal management-(Drone control, swarm control and Queen control. Rainy season, etc)	5	

NSQF QUALIFICATION FILE

4	Apiary & Grafting method (Theory and Practical)	20	4
a	Site selection, Bee flora, seasonal flower. water, shade.	5	
b	Bee colony migration.	5	
c	Type and Uses of grafting equipment	5	
d	Artificial Queen rearing, etc.	5	
5	Honey/Wax extraction (Theory and Practical)	25	4
a	Uses of honey, Honey bee wax and its uses.	6	
b	Quality control of honey, extraction-filtration, indirect heating and storage	6	

NSQF QUALIFICATION FILE

c	Wax extraction	6	
d	Bee Enemies/Pest/Diseases and management	7	
6	Pollination and other natural requirements (Theory and Demonstration)	10	4
a	Honey Bee in relation with agriculture	5	
b	Honey bee and pesticide poisoning	3	
c	Honey production in relation to water	2	
7	Bee colony capturing from wild and introduction into hive (Practical)	15	4
8	Bee Botany and Preparation of floral calendar (Theory and Practical)	15	4

NSQF QUALIFICATION FILE

a	Herbarium collection and preservation	15	
9	Exposure Visit- opportunity to interact with successful beekeepers (Exposure Visit)	15	4
10	Management of resources and Opportunities (Theory)	15	4
a	Enterprise management, men, material and money	7	
b	Knowledge on supporting agencies- KVIC,NABARD, DICC. SIDBI, MSME, Banks.	8	
11	Marketing aspects/Entrepreneurship Awareness/ Examination(Theory and Practical)	25	4
a	Record and book keeping	6	
b	Achievement Motivation Training	6	

NSQF QUALIFICATION FILE

c	Games on achievement	6	
d	Examination (Theory and Practical)	7	
Sub Total (A)		200 hours	
Optional components			
	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
	NA	NA	NA
	NA	NA	NA
	Sub Total (B)	NA	NA
Total (A+B)		NA	NA

SECTION 1

ASSESSMENT

<p>21</p>	<p>Body/Bodies which will carry out assessment: The assessments will be carried out by the evaluators of State Council of Science and Technology Govt. of Sikkim; Sikkim Khadi and Village Industries Board; Indian Council of Agricultural Research, Sikkim; State Institute of Capacity Building, Sikkim; These evaluators would be chosen from the panel of experts who are not part of the trainers. Based on the evaluation, certificates will be issued.</p>
<p>22</p>	<p>How will RPL assessment be managed and who will carry it out? No RPL in this programme</p>
<p>23</p>	<p>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF. The overall assessment will be done through theory, practical and viva exams at the end of the course. Moreover, students will be assessed regularly through practical and demonstration on every module in the classroom. For practical examination, the trainers as well as course supervisors will constantly keep a vigil on the trainees. Any errors committed by the trainees will be corrected immediately; learning by doing technique will be adopted for practical assessment. In theory, a final examination will be conducted at the end of the course, in which 50% scoring will be considered to be as qualifying marks. The Assessments will be conducted through English/Regional language Questionnaires on the basis of level of understanding and gaining knowledge. However, the invigilators (not Trainers/Supervisors) will be empowered to explain/translate the question to the trainees in their regional language, if required. The trainers will not be involved in the assessment, whatsoever, at any point.</p>

NSQF QUALIFICATION FILE

24. Assessment evidences

Title of Component:

Sr. No.	Learning Outcome	Outcomes to be assessed	Assessment criteria for the outcome
1	Unit 1. History of Beekeeping, Its economic importance (Theories) <ul style="list-style-type: none"> • Type of Bee Products (Honey, Royal jelly, pollen and Bee colony) • Demand of consumer related to bee products. • Wild Honey Bee species - Apis cerana subsp cerana, himalayana, Apis dorsata, Apis laboriosa, Apis mellifera and Trigona species • Life cycle of Honey Bee • Apis cerana subsp cerana, Apis cerana subsp himalayana -External Morphology and Internal Morphology, Behaviour and Ecology • Type of Beekeeping Equipments for Wild honey bee-A. cerana 		By question answer session at the end of the day
2	Unit 2. Colony organization/ Colony capturing /Colony division, Colony united (Theory and Practical) <ul style="list-style-type: none"> • Queen, New Queen cell formation, fertilized virgin, Queen mating, drone, etc. • Swarm colony and Natural colony • Queen less colony control and apply of queen cell, control of worker laying, etc. 		By conducting Evaluation Test
3	Bee handling and management/Seasonal management (Practical) <ul style="list-style-type: none"> • Dearth period • Growth period • Honey flow period • Seasonal management-(Drone control, swarm control and Queen control, Rainy season, etc 		By conducting Evaluation Test

NSQF QUALIFICATION FILE

4	Apiary & Grafting method (Theory and Practical) <ul style="list-style-type: none"> • Site selection, Bee flora, seasonal flower, water, shade. • Bee colony migration. • Artificial Queen rearing, etc. 	By conducting Evaluation theory test and Viva-voce in field
5	Honey/Wax extraction (Theory and Practical) <ul style="list-style-type: none"> • Uses of honey, Honey bee wax and its uses. • Quality control of honey, extraction-filtration, indirect heating and storage • Wax extraction • Bee Enemies/ Pest/Diseases and management 	By conducting Evaluation theory test and Viva-voce
6	Pollination and other natural requirements (Theory and Practical) <ul style="list-style-type: none"> • Honey Bee in relation with agriculture • Honey Bee and pesticide poisoning • Honey production in relation to water 	By conducting Evaluation theory, practical test and Viva-voce on field and off field
7	Bee Colony capturing from wold and introduction into hive (Practical)	By conducting Evaluation theory, practical test and Viva-voce on field and off field
8	Bee Botany and Preparation of floral calendar (Theory and Practical) <ul style="list-style-type: none"> • Herbarium collection and preservation 	By conducting Evaluation Test
9	Exposure Visit – opportunity to interact with successful beekers.	By conducting Evaluation Test
10	Management of resources and opportunities (Theory) <ul style="list-style-type: none"> • Enterprise management, men, material and money. • Knowledge on supporting agencies – SKVIB, ICAR, NABARD, SISCO 	By conducting Evaluation Test
11	Marketing aspects/Entrepreneurship Awareness/Examination (Theory and Practical) <ul style="list-style-type: none"> • Record and Book keeping • Achievement Motivation Training • Games on achievement • Examination(Theory and Practical) 	By conducting Evaluation Test
		Means of assessment 1 Theory and Practical exam on field and through Viva-voce

NSQF QUALIFICATION FILE

		Means of assessment 2 Set up of relevant and qualitative questions, Multiple Choice Questions (MCQ) for theory assessment. Conducting practical exams on selective Modules.
		Pass/Fail The pass mark for Theory exam (Multiple Choice Questionnaire) will be 50 out of 100. In Practical, 75 marks for Practical exam and 25 mark for viva-voce. Pass mark will be 50 marks but in Practical exam Trainee should score at least 40 marks out of 75.

NSQF QUALIFICATION FILE

SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Ecotourism for Rural Youths			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
Process	Trainee would get an advanced knowledge of wild beekeeping. They would be able to understand the wild available bee species and their importance, pre and post harvest methods, collection, processing techniques and their conversion into final product for sustainable livelihood furniture making.	The trainees should possess an advanced knowledge of wild beekeeping and their collection. They can execute standard harvesting methods and it's processing pertaining to honey products. They are required to be skilled in their field and would be able to act as master trainers at the end of the course or become entrepreneur.	3
Professional knowledge	Trainees would get a factual knowledge of wild honey bee identification, harvesting, processing of raw material, operating processing techniques, independent labelling and their marketing.	The trainee displays professional knowledge from a systematic training on collection, processing on wild beekeeping which may includes all the honey and its product harvesting and processing techniques along with the marketing and entrepreneurship aspects. This would also create entrepreneurship among them and help them to form Self Help Groups (SHGs). They	3

NSQF QUALIFICATION FILE

Title/Name of qualification/component: Ecotourism for Rural Youths			Level: 4
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relates to the NSQF level descriptors	NSQF Level
		would have full responsibility for product value addition.	
Professional skill	The trainees should have hands on skill on wild beekeeping and processing to the final products. They are able to independently undertake conversion of raw material into final products through usage of harvesting. They may also become Master trainers in their field.	The trainee has professional skill to making quality products from locally available wild bee species.	4
Core skill	In terms of core skills, trainees would gain advanced knowledge of entrepreneurship Skill development, bank schemes and latest marketing techniques. They would also get exposure with the successful entrepreneurs in the related fields.	The trainee should be able to perform, execute and manage the activities related to processing of wild honey and its management, product value addition and marketing of the product.	4
Responsibility	Trainees are able to independently initiate the harvesting & processing of wild honey, kits & equipment handling, market oriented design & product development and their marketing.	The trainees would be responsible for quality improvement in product development by using processing techniques machines as a Beekeeper /entrepreneur and would also be responsible for the development of group as master trainers/specialists.	4

NSQF QUALIFICATION FILE

OPTION B

Title/Name of qualification/component: Enter the title here number			Level: Add level
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	NA	NA	NA
Professional knowledge	NA	NA	NA
Professional skill	NA	NA	NA
Core skill	NA	NA	NA
Responsibility	NA	NA	NA

SECTION 3

EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?	
	Basis	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)
	Need of the qualification:	Apiculture is a powerful way of tackling poverty at the grassroots level. In India, besides food security, the concern to improve livelihood of small holder farms has become a dominant issue. There is need to provide youths and farmers additional options for increasing their income. International demands for speciality products such as honey, Royal jelly are some of the emerging highly potential options for increased profitability and income. Since, apiculture is a non-land based activity and does not require much input can help in generating income opportunity for the weaker sections of the society and have huge potential for livelihood opportunities.
	Industry Relevance:	The curriculum/course syllabus has been jointly prepared by the Scientists/Experts in the institutions/Govt. Departments/NGOs which have the expertise to undertake such courses in their respective locations. The curriculum/course syllabus has been initially prepared and implemented by ENVIS Hub Assam at ASTEC during 2018-19. Sikkim ENVIS Hub at Forest, Environment & Wildlife Management Department, Government of Sikkim at Gangtok has adopted this course in relevance to Sikkim State.
	Usage of the qualification	In order to harness the potential and prospects of Bee keeping in Sikkim for increasing the livelihood opportunities, a systematic training on collection, processing on wild beekeeping which may includes all the honey and its product harvesting and processing techniques along with the marketing and entrepreneurship aspects is required.
	Estimated uptake	An uptake of 25 students at each location is envisaged.

NSQF QUALIFICATION FILE

27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body to be supported by documentary evidences</p> <p>NA</p>
28	<p>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</p> <p>National Qualifications Register was searched online to assess if there was any similar qualification programme initiated in this field.</p>
29	<p>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here</p> <p>Feedback would be taken from experts, students and teachers regarding the course content, structure and timeline of the programme. Feedback will also be taken from the Centres conducting the course. Changes suggested will be assessed by the Ministry before incorporating them in the curriculum. Next review will be done in March 2020.</p>

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?</p> <p><i>Show the career map here to reflect the clear progression</i></p> <p>The course is designed in such a way that it will include systematic training on harvesting, collection, processing of Wild beekeeping along with the entrepreneurs and marketing aspect viz. SKVIB, ICAR, SISCO, NABARD etc. This may further lead to becoming an entrepreneur.</p> <div style="text-align: center;"> <p>Wild beekeeper/ Wild beekeeper assistant</p> <p>↓</p> <p>On the Job Training</p> <p>↓</p> <p>Master Trainer/Self-sustainable Entrepreneur</p> </div>
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