



QUALIFICATION FILE

Water Hyacinth (Value Added Products) Entrepreneur

☒ Short Term Training (STT) ☐ Long Term Training (LTT) ☐ Apprenticeship

☐ Upskilling ☐ Dual/Flexi Qualification For ToT ☐ For ToA

☒ General ☐ Multi-skill (MS) ☐ Cross Sectoral (CS) ☐ Future Skills ☐ OEM

NCrF/NSQF Level: 4.0

Submitted By:

EIACP Cell, Ministry of Environment Forest and Climate Change (MoEFCC)

Skill Council for Green Jobs

Chief Executive Officer

CBIP Building, Malcha Marg,

Chanakypuri, New Delhi – 110021

Contact no. and mail: 9899505533, ceo@sscgj.in

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Section 1: Basic Details

1.	Qualification Name	Water Hyacinth (Value Added Products) Entrepreneur																	
2.	Sector/s	Environmental Science																	
3.	Type of Qualification: ☒ New ☐ Revised ☐ Has Electives/Options ☐ OEM	NQR Code & version of existing/previous qualification: QG-04-ES-04260-2025-V1-SCGJ & Version 1		Qualification Name of existing/previous version: NA															
4.	a. OEM Name b. Qualification Name (Wherever applicable)	NA																	
5.	National Qualification Register (NQR) Code &Version	QG-04-ES-04260-2025-V1-SCGJ & version 1		6. NCrF/NSQF Level: 4.0															
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other	Certificate																	
8.	Brief Description of the Qualification	Water Hyacinth (Value added Products) Entrepreneur -The purpose of this qualification is to increase livelihood opportunities for unskilled population and promote entrepreneurial skills through systematic training on collection, processing, value-addition and marketing of products made from water hyacinth. By turning a challenging weed into a valuable resource, not only can environmental harm be mitigated, but local economies can also be bolstered through the creation of sustainable livelihoods.																	
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>10th Grade Pass</td> <td>with 3-year relevant experience in any handicraft industries</td> </tr> <tr> <td>2.</td> <td>12th grade pass</td> <td>NA</td> </tr> <tr> <td>3.</td> <td>Previous relevant Qualification of NSQF Level 3.0</td> <td>With 3.0-years relevant experience in any handicraft industries</td> </tr> <tr> <td>4.</td> <td>Previous relevant Qualification of NSQF Level 3.5</td> <td>with1.5-years relevant experience in any handicraft industries</td> </tr> </tbody> </table>			S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1.	10th Grade Pass	with 3-year relevant experience in any handicraft industries	2.	12th grade pass	NA	3.	Previous relevant Qualification of NSQF Level 3.0	With 3.0-years relevant experience in any handicraft industries	4.	Previous relevant Qualification of NSQF Level 3.5	with1.5-years relevant experience in any handicraft industries
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2.	12th grade pass	NA																	
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4.	Previous relevant Qualification of NSQF Level 3.5	with1.5-years relevant experience in any handicraft industries																	

10	Credits Assigned to this Qualification, Subject to Assessment (as per National Credit Framework (NCrF))	13	11. Common Cost Norm Category: I																					
12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NA																						
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	☒ Offline ☐ Online ☐ Blended <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>140 hours with Employability Skills</td> <td>160</td> <td>90</td> <td></td> <td>390</td> </tr> <tr> <td>Online</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> (Refer Blended Learning Annexure for details)					Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	140 hours with Employability Skills	160	90		390	Online					
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																			
Classroom (offline)	140 hours with Employability Skills	160	90		390																			
Online																								
14.	Aligned to NCO/ISCO Code/s (if no code is available mention the same)	7319 (Handicraft Workers not classified elsewhere)																						
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	Horizontal Progression: Supervisor																						
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																						
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No																						

18.	Is the Job Role Amenable to Persons with Disability	☒ Yes ☐ No If “Yes”, specify applicable type of Disability: ☒ Deaf ☐ Hard of Hearing ☒ Acid Attack Victims ☒ Dwarfism Person with disability can play an entrepreneurial role by opening a counter/ Selling point for products prepared from Water Hyacinth.	
19.	How Participation of Women will be Encouraged	Women candidates are eligible to apply and will be encouraged for active participation in the course. Women may also be engaged in production/sale of the crafts made from Water Hyacinth equally as men. They can easily acquire knowledge related to skills/craft based on water hyacinth, and prosper in their professional life.	
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	☒ Yes ☐ No All module except employability skills	
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No	
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	Name: Mr. Arpit Sharma Email: ceo@sscgi.in Contact No.: 9899505533 Website: https://sscgi.in/	
23.	Final Approval Date by NSQC: 08-05-2025	24. Validity Duration: 3 years	25. Next Review Date: 07-05-2028

Section 2: Module Summary

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/non-core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.	Introduce course collection, cleaning and processing of water hyacinth	SGJ/N4118	core	4.0	1	15	15	-	-	30	20	30	-	-	50	16
2.	Utilise water Hyacinth for Pulp Processing and Paper making	SGJ/N4119	core	4.0	1	5	25	-	-	30	12	38	-	-	50	12
3.	Utilise water Hyacinth for weaving and Handicraft making	SGJ/N4120	core	4.0	1	10	20	-	-	30	20	30	-	-	50	12
4.	Utilise water Hyacinth for Mushroom Cultivation	SGJ/N4121	core	4.0	1	10	20	-	-	30	25	25	-	-	50	12
5.	Utilise water Hyacinth for Briquette production	SGJ/N4122	core	4.0	1.5	15	30	-	-	45	23	27	-	-	50	12
6.	Utilise water Hyacinth for Biogas production	SGJ/N4123	core	4.0	1.5	15	30	-	-	45	20	30	-	-	50	12
7.	Finishing and Marketing of Products	SGJ/N4124	core	4.0	1	10	20	-	-	30	20	30	-	-	50	12
8.	Employability Skills (ES)	DGT/VSQ/N0102	Non-core	4.0	2	60		-	-	60	20	30	-	-	50	12
9.	On the Job Training				3	-	-	90		90	-	-	-	-		
Duration (in Hours) / Total Marks						140	160	90		390	160	240			400	100

NOS/s of Qualifications

(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project

Assessment - Minimum Qualifying Percentage

Minimum Pass Percentage – Aggregate at qualification level: 70 % (Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	12th Pass + 2 years' experience or 10th Pass + 5 years' experience in the relevant sector He/ she should be safety conscious and proficient in handling Water Hyacinth products making tools and equipment.
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Graduate + 2 years' experience in the relevant sector He/ she should be safety conscious and proficient in handling Water Hyacinth products making tools and equipments.
3.	Tools and Equipment Required for Training	☒ Yes ☐ No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Not Applicable

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate/ Diploma with 2 years' experience/PG and above Practicing/Successful Entrepreneur NCVET approved assessor
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate/ Diploma with 5 years' experience/PG and above Practicing/Successful Entrepreneur NCVET approved assessor, experienced as invigilator
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Graduate with 7 years of experience in relevant field/PG and above Practicing/Successful Entrepreneur NCVET approved assessor, experienced as invigilator
4.	Assessment Mode (Specify the assessment mode)	Online and offline both
5.	Tools and Equipment Required for Assessment	☒ Same as for training ☒ Yes ☐ No (details to be provided in Annexure-if it is different for Assessment)

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	Latest Skill Gap Study (not older than 2 years) (Yes/No): Yes Several studies and reports have projected a significant rise in demand for green professionals. It is estimated that up to 300 million additional green-collar jobs are likely to be created by 2050. Intergovernmental bodies like United Nations Environment Program, United Nations Development Program and International Labor Organization have projected a huge surge in the demand for green professionals. Main characteristic of the concept is the acknowledgment of the economic value of natural capital and ecological services and the need to protect those resources. The approach includes not only environmental aspects but incorporate the more holistic approach of sustainable development. Environmental sustainability, social justice and locally rooted production and exchange of goods and services are therefore elements that can be found in most green economy definitions. Reference: 1. Green jobs, green economy, just transition and related concepts-International Labour Organization 2023 2. World Employment and Social Outlook- International Labour Organization 2023
2.	Latest Market Research Reports or any other source (not older than 2 years) (Yes/No): Yes The latest research on GSDP studies the programme for skilling manpower for employability and livelihood generation and identifying green skills for short term as well as long term enterprise development. This type of skill development programme sets values and attitudes that an individual needs to develop and promote sustainability, environmental conservation and socio-economic conditions in business, industry and community(D.S. Mallika &D.Jebasingh Raja, An Empirical study on the Green Skill Development Programme and its inclusiveness in Green Industries for effective Green Marketing and Sustainable Development: Key Success Factors and Challenges, 2022).
3.	Government /Industry initiatives/ requirement (Yes/No): No The course has been developed by Ministry of Environment, Forest and Climate Change
4.	Number of Industry validation provided: 15 Provided in the annexure
5.	Estimated nos. of persons to be trained and employed: 150 candidates in next two years.
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Concurred by Ministry of Environment, Forest and Climate Change (Line Ministry).

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	Annexure: NCrf/NSQF level justification based on NCrf level/NSQF descriptors (<i>Mandatory</i>)	Annexure: Evidence of Level
2.	Annexure: List of tools and equipment relevant for qualification (<i>Mandatory, except in case of online course</i>)	Annexure: Tools and Equipment (Lab Set-Up)
3.	Annexure: Detailed Assessment Criteria (<i>Mandatory</i>)	Annexure: Detailed Assessment Criteria (<i>Mandatory</i>)
4.	Annexure: Assessment Strategy (<i>Mandatory</i>)	Annexure: Assessment Strategy
5.	Annexure: Acronym and Glossary (<i>Optional</i>)	Annexure: Acronym and Glossary
6.	Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>)	Attached
7.	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	Annexure: Career progression and OM
8.	Supporting Document: Occupational Map (<i>Mandatory</i>)	Annexure: Career progression and OM
9.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	Annexure: Assessment Strategy

Annexure 1: Evidence of Level

Title/Name of qualification/component: Water Hyacinth (Value added Products) Entrepreneur			
Level: 4.0			
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Professional Theoretical Knowledge/Process	Trainees will possess specialized knowledge of procedures employed in both routine and non-routine contexts. They will possess specialized operational knowledge required in Water Hyacinth related handicraft and will understand all the aspects of the work. They will understand the financial and feasibility aspect of various work components.	Trainees will be able to understand procedure employed in Water Hyacinth related products. Participants after completion of Job role will possess specialized operational knowledge. They will understand financial and economic considerations of the prevailing market.	4
Professional and Technical Skills/ Expertise/ Professional Knowledge	Trainees will possess specialized professional and technical skills in Water Hyacinth related products. They will display clarity of professional knowledge and technical skills in Water Hyacinth related products sector. They can apply knowledge for successfully implementing Water Hyacinth related products. They will clearly identify the relevant tools and its uses.	Trainees will develop specialized professional and technical skills for Water Hyacinth related products. They will implement knowledge acquired for successful implementation.	4
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Trainees will develop much broader Employability Skills including understanding of career planning, digital skills, financial and legal literacy. Trainees will also have good Communication skills. Develop skills for self-employment and entrepreneurship skills.	Trainees will develop employability skills, financial and legal literacy, communication skills. They will develop skills for self-employment and entrepreneurship.	4
Broad Learning Outcomes/Core Skill	Trainees will carry out specialized job/ work. They can handle application of standard and non-standard procedures. Perform complex tasks by themselves without much instruction and supervision. They will be able to work independently as Technician or as an entrepreneur.	Trainees will work independently as Water Hyacinth related products entrepreneur.	4
Responsibility	Trainees will become highly skilled. Can perform all non-standard procedures and non-routine tasks with confidence.	Trainees would be skilled and enough to be able to perform all non-standard procedures and non-routine tasks with confidence.	4

Annexure 2: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

Batch Size: 20 and 30

S. No.	Tool / Equipment Name	Specification	Quantity for specified 20 Batch size (one item per candidate)	Quantity for specified 30 Batch size (one item per candidate)
1	Mixer grinder	As per Industry Specification	3	3
2	Chaff cutter/Saag cutter	As per Industry Specification	2	3
3	LPG Gas Stove	2 – 3 burners (As per Industry Specification)	3	4
4	Hot Air Oven	As per Industry Specification	2	2
5	Pressure Cooker	As per Industry Specification	3	4
6	Electric Induction Cooker	As per Industry Specification	1	2
7	Hand / Foot operated Briquetting machine	As per Industry Specification	2	3
8	Mould & deckle	As per Industry Specification	15	15
9	Wooden frames	As per Industry Specification	15	15
10	Steel vessel	As per Industry Specification	5	7
11	Kitchen Knives	As per Industry Specification	15	15
12	Masonry trowels	As per Industry Specification	5 each	7 each
13	Scissors	As per Industry Specification	15	20
14	Gloves	As per Industry Specification	50 pairs	60 pairs
15	Lab Trays	As per Industry Specification	30	35
16	Spray bottle	As per Industry Specification	3	4
17	Cutting board	As per Industry Specification	15	20
18	Kitchen balance	As per Industry Specification	3	4
19	Binders	As per Industry Specification	1 litre	1 litre

20	Rope	As per Industry Specification	15-20 meters	20-30 meters
21	Polypropylene bags (PP cover)	As per Industry Specification	15	20
22	Cotton cloth	As per Industry Specification	5 meters	10 meters
23	Mushroom spawn	As per Industry Specification	8 packets	10 packets

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Laptop with Internet connection
2. White Board/ Projector, etc.

Annexure 3: Industry Validations Summary

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile (if available)
1	REVV Environmental Solution Pvt Ltd	Dr Vanita Prasad	Founder, Director & CTO	Not specified	8156009652	vanita.prasad@revv.co.in	
2	HTWOMINE SOLUTIONS PRIVATE LIMITED	Supriya Tirthkar	Director	Sr no. 21/3B, Ragoba Patil Nagar, Pune, Maharashtra	9.18391E+11	Supriya.tirthkar@gmail.com	
3	VACEN ENGINEERING AND SOLUTIONS PRIVATE LIMITED	Vibhutinath Pandey	Director	H-72-A, Second Floor, Kh No. 80/14, Mahavir Enclave, Palam, New Delhi-1100945	7503208625	vibhuti.vacen@gmail.com	
4	GD Goenka University	Vipul Pandey	AGM	GD Goenka Education City, Sohna Gurugram “Haryana 122013	9149057199	vipul.pandey@gdgu.org	
5	Heemsol Energy System Pvt Ltd	Dipti Shah	Director	1st Floor Giriraj Complex, Opp. Bank of Baroda, Ahmedabad, Gujarat-380013	9898167641	dipti@heemenergy.com	
6	GOREnewable Technology	Japen Gor	Managing Partner	214, Devpath Complex, B/H Lal Bungalow, Off C.G. Road, Ahmedabad, Gujarat-380009	9099064257	japen@gorennewtech.com	
7	TAPSIL JATI ADIBASI PRAKTAN SAINIK KRISHI BIKASH SHILPA KENDRA	Soumen Koley	Secretary	Gentegory, Palashy, Dhaniakhali, Hooghly, West Bengal, 712303	9647690557 / 8860597565	s.n.koley20@gmail.com	
8	Chronic Foundation	Ramesh S	Chairman	No 55, Opp to Shanubhoganahally Lake, Chokkanahalli, Arekere	9845010306	ramesh@chronicfoundation.org	

				Post, Bangalore North 562163			
9	Green Life Solution Pvt. Ltd.	Vikas Deshpande	General Manager - Sales	XI-74/6, Behind Priyadarshini Polytechnic, MIDC, Hingna Road, Nagpur â€“ 440 016	+91 9225332011		
10	Danao Green Tech Private Limited	Dr Sanjay Danao	Director	203, Sai Avenue, D-7, CIDCO Meghdoot, Butibori MIDC, Nagpur â€“ 441122	+91 9545648496	danaogreentech@gmail.com	
11	EVOLT ENERGY SYSTEMS LLP	Sarthak Shukla	Partner	304, Plot No. 4, Aditya Complex, Sector-10, Dwarka, New Delhi, 110075	+91 7073351655	sarthak@e-volt.in	
12	Novace Pvt. Ltd.	Riplav	Director	Anand Cinema, Kabirpur Road, Near Milk Plant, Sonapat, Haryana 131001	+91 7082598980	novaceev@gmail.com	
13	Terra Charge India Pvt. Ltd.	Debyan Das	Network Expansion Head	Stesalit Tower, Block-GP, E- 2-3, Sector-V, Salt Lake, West Bengal 700091	8820885275	debayandas@terra-charge.co.in	
14	Turing Solutions	Not Available	Not Available	Not Specified	Not Specified	Not Specified	
15	Nimar Solar	Satyendra Singh Chouhan	Director	305, KB Mall, Sapna Sangeeta Road, Indore (M.P.)-452001	+91 7000834564	info.nimarsolar@gmail.com	

Annexure 4: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2025-26	200	50	40	10	10	2
2026-27	200	50	40	10	10	2
2027-28	100	20	10	2	5	1

Training, Assessment, Certification, and Placement Data for previous versions of qualifications: Not Applicable (as this is a new course)

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-

Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented: Not Applicable

Content availability for previous versions of qualifications: Not Applicable

☐ Participant Handbook ☐ Facilitator Guide ☐ Digital Content ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available: N

Annexure 5: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4118: Introduce course collection, cleaning and processing of water hyacinth	Introduction to Water hyacinth, source of water hyacinth and its types etc.	9	15	-	-
	PC1. Describe about the problems of water hyacinth growing in waterbodies.	2	-	-	-
	PC2. Discuss how it is a problem for fishing community	1	-	-	-
	PC3. Discuss how it is economically viable	2	-	-	-
	PC4. Describe the concept of invasive species	1	-	-	-
	PC5. Discuss the invasive weed water hyacinth	1			
	PC6. Discuss the management of the invasive weed species.	1		-	-
	PC7. Discuss the need for the eradication procedures of invasive weed	1			
	PC8. Demonstrate and show water hyacinth plant in various water bodies, the stem of the plant and various products made out of it.	-	5		
	PC9. Demonstrate a range of cognitive and practical skills required to identify polluted areas.	-	5		

PC10. Demonstrate polluted water bodies, identify different weed and extraction process.	-	5		
<i>Raw Material Preparation and Preservation of Water Hyacinth</i>	11	15		
PC11. Understand the invasive weed water hyacinth.	2			
PC12. Understand the procedures for collecting water hyacinth.	3	-		
PC13. Discuss the techniques that are involved to descend into water body and harvest the plant.	3	-		
PC14. Discuss how to cut leaves and root off the stems and laid out to dry in sunlight	1	-		
PC15. Discuss post-harvest processing of water hyacinth like cleaning, drying and managing raw material.	2	-		
PC16. Demonstrate how the plant will be cut and brought out to be taken away for drying.	-	5		
PC17. Demonstrate to dry out the stem; occasionally turn them over. Care to be taken not to over – dry them or expose them to moisture.	-	5		
PC18. Demonstrate operating different types of machines/tools.	-	5		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4119: Utilise water Hyacinth for Pulp Processing and Paper making	Pulping and making of pulp products	-	12	-	-
	PC1. Demonstrate how to chop and prepare water hyacinth for the pulping process.	-	2	-	-
	PC2. Perform the chemical or mechanical pulping of water hyacinth using appropriate tools.	-	2	-	-
	PC3. Measure the consistency and quality of water hyacinth pulp through simple tests.	-	2	-	-
	PC4. Create basic pulp products, such as sheets, packaging materials, or molded items.	-	2	-	-
	PC5. Demonstrate various steps to make different products	-	2	-	-
	PC6. Demonstrate how to create Finished Products	-	2		
	Mould and Deckle. Handmade paper making process	-	10		
	PC7. Demonstrate Collection & processing of water hyacinth.	-	2		
	PC8. Make mould & deckle using appropriate tools.	-	2		
	PC9. Demonstrate Hand-made paper making process	-	2		

PC10. Create Handmade paper products and work on their finishing	-	2		
PC11. Inspect pulp products for defects, such as uneven texture or weak spots.	-	2		
Product finishing, binding.	12	16		
PC12. Explain the importance of finishing in enhancing the quality of pulp products made from water hyacinth.	3	-		
PC13. Identify different binding techniques used in paper and pulp product manufacturing.	3	-		
PC14. Describe the steps involved in the finishing process, including smoothing, trimming, and embossing.	3	-		
PC15. Discuss the types of adhesives and materials used for binding pulp products.	3	-		
PC16. Prepare pulp products from water hyacinth for the finishing process.		2		
PC17. Demonstrate smoothing techniques using hand tools to refine pulp surfaces.	-	2		
PC18. Trim the edges of pulp products to ensure evenness and uniformity.	-	2		
PC19. Show how to apply embossing techniques to add texture or decorative patterns.	-	2		
PC20. Perform the process of stitching paper products using a needle and thread.	-	2		

PC21. Test the durability of bound pulp products by applying pressure or water resistance tests.	-	2		
PC22. Decorate pulp products with sustainable binding materials such as natural fibers or recycled threads.	-	2		
PC23. Document the binding techniques used, noting adjustments for improving product quality.	-	2		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4120: Utilise water Hyacinth for weaving and Handicraft making	<i>Processing of Water Hyacinth for Weaving and handicraft making.</i>	20	30	-	-
	PC1. Explain the steps involved in processing water hyacinth for use in weaving and handicraft making.	5	-	-	-
	PC2. Identify the different properties of water hyacinth that make it suitable for weaving.	5	-	-	-
	PC3. Describe the preparation techniques for cleaning and drying water hyacinth before weaving.	5	-	-	-
	PC4. Discuss the types of tools and equipment commonly used in weaving with water hyacinth.	5	-	-	-
	PC5. Demonstrate cleaning techniques to remove impurities from water hyacinth fibres.	-	3	-	-
	PC6. Perform drying methods to prepare water hyacinth for storage and future use.	-	3	-	-
	PC7. Cut and organize water hyacinth fibres into manageable sizes for weaving.	-	3	-	-
	PC8. Weave simple patterns using water hyacinth fibres, such as mats, baskets, or mats.	-	3	-	-
	PC9. Practice basic weaving techniques such as over-under, plain weave, or twill.	-	3	-	-

	PC10. Assemble multiple strips of water hyacinth into more complex woven products.	-	3		
	PC11. Inspect finished woven products for quality, ensuring tightness, consistency, and durability.	-	4		
	PC12. Decorate water hyacinth woven items using additional natural fibres, beads, or other embellishments.	-	4		
	PC13. Document the steps and outcomes of processing water hyacinth for weaving, noting areas for improvement.	-	4		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4121: Utilise water Hyacinth for Mushroom Cultivation	Processing of Water Hyacinth for bed preparation/substrates for mushroom cultivation. Identify different species of Mushroom. Packaging of Mushrooms and Value addition	25	25	-	-
	PC1. Explain the importance of using water hyacinth as a substrate for mushroom cultivation.	4	-	-	-
	PC2. Describe the processing steps required to prepare water hyacinth for mushroom bed creation.	4	-	-	-
	PC3. Discuss the nutritional benefits of water hyacinth as a substrate for mushroom growth.	4	-	-	-
	PC4. Identify different types of mushrooms that can be cultivated on water hyacinth substrates.	4	-	-	-
	PC5. Explain the factors that influence the success of mushroom cultivation using water hyacinth.	4	-	-	-
	PC6. Discuss the packaging techniques that help maintain the freshness and quality of harvested mushrooms.	5	-		
	PC7. Collect water hyacinth suitable for use as a substrate for mushroom cultivation.	-	2		
	PC8. Prepare water hyacinth by cleaning, drying, and shredding it into smaller pieces.	-	2		

PC9. Inoculate the substrate with mushroom spawn, ensuring proper spacing and coverage.	-	2		
PC10. Monitor the moisture levels in the water hyacinth substrate to support healthy mushroom growth.	-	3		
PC11. Harvest mushrooms at the appropriate stage of development based on visual and growth indicators.	-	3		
PC12. Package harvested mushrooms using breathable containers to maintain freshness and prevent spoilage.	-	3		
PC13. Label packaged mushrooms clearly with production date and other relevant details.	-	3		
PC14. Evaluate the quality of mushrooms by assessing size, color, texture, and aroma.	-	3		
PC15. Record observations during each step of mushroom cultivation and packaging, identifying areas for improvement.	-	4		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4122: Utilise water Hyacinth for Briquette production	<i>Briquette production, raw material and machines involved.</i>	23	27	-	-
	PC1. Explain the process of briquette production and its benefits as an alternative fuel.	4	-	-	-
	PC2. Describe the different raw materials that can be used for briquette production, including water hyacinth.	4	-		
	PC3. Discuss the chemical composition and properties of water hyacinth that make it suitable for briquette production.	4	-		
	PC4. Identify the types of machines and equipment commonly used in the briquetting process.	3	-		
	PC5. Illustrate the importance of moisture control in raw materials during briquette making.	4	-	-	-
	PC6. Explain the different types of briquettes (e.g., biomass briquettes) and their applications.	4	-	-	-
	PC7. Collect water hyacinth and other suitable organic materials for briquette production.	-	3	-	-
	PC8. Prepare the raw materials by cleaning and drying them to remove excess moisture.	-	3		
	PC9. Shred water hyacinth into smaller pieces to facilitate easier blending and binding.	-	3		

	PC10. Operate the briquetting machine to press the raw materials into uniform briquettes.	-	3		
	PC11. Monitor the pressing process to ensure the correct density and size of the briquettes.	-	3		
	PC12. Inspect the quality of the briquettes by assessing density, shape, and durability.	-	3		
	PC13. Test the combustion properties of the briquettes to evaluate their fuel efficiency.	-	3		
	PC14. Package the briquettes in appropriate packaging to prevent moisture absorption and damage.	-	3		
	PC15. Record observations during each step of briquette production, noting areas for improvement.	-	3	-	-

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4123: Utilise water Hyacinth for Biogas production	<i>Biogas production, installation and precautions.</i>	20	30	-	-
	PC1. Explain the process of biogas production and its benefits as a renewable energy source.	3	-	-	-
	PC2. Describe the different types of biogas digesters and their components.	3	-	-	-
	PC3. Discuss the chemical and biological principles behind the anaerobic digestion process.	3	-	-	-
	PC4. Identify the types of organic materials that can be used for biogas production, including water hyacinth.	3	-	-	-
	PC5. Explain the steps involved in the installation of a biogas plant.	3	-	-	-
	PC6. Illustrate the importance of maintaining proper pH, temperature, and retention time in biogas production.	3	-	-	-
	PC7. Discuss the safety precautions necessary during biogas production and installation.	2	-	-	-
	PC8. Collect organic materials, such as water hyacinth, suitable for biogas production.	-	3	-	-
	PC9. Prepare feedstocks by cleaning, shredding, and mixing them to ensure proper digestion.	-	3	-	-

	PC10. Install the biogas digester according to manufacturer guidelines and environmental conditions.	-	4		
	PC11. Operate the biogas plant by feeding the prepared organic materials into the digester.	-	4		
	PC12. Monitor the temperature, pH, and pressure inside the biogas digester to optimize conditions for digestion.	-	4		
	PC13. Test the biogas production process by measuring gas output using appropriate equipment.	-	4		
	PC14. Maintain the biogas digester by regularly inspecting and cleaning the components.	-	4		
	PC15. Apply safety precautions while handling biogas and biogas plant components.	-	4		

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory	Practical	Project	Viva
SGJ/N4124: Finishing and Marketing of Products	<i>Finishing and Marketing of the products</i>	20	30	-	-
	PC1. Explain the importance of finishing techniques in enhancing the quality and marketability of products made from water hyacinth.	2	-	-	-
	PC2. Describe the various finishing methods used to improve the appearance, texture, and durability of water hyacinth products.	2	-	-	-
	PC3. Discuss the key factors that influence the market demand for handmade products made from water hyacinth.	2	-	-	-
	PC4. Explain 4Ps of marketing, managing the customer.	2	-	-	-
	PC5. Identify different marketing channels and platforms suitable for promoting water hyacinth products.	3	-	-	-
	PC6. Illustrate techniques for packaging that protect water hyacinth products and enhance their appeal to buyers.	3	-	-	-
	PC7. Explain the role of social media and digital marketing in promoting handmade water hyacinth products.	3	-	-	-
	PC8. Discuss ways to build customer relationships and gain repeat business for water hyacinth products.	3	-	-	-

	PC9. Clean and prepare water hyacinth products for the finishing process.	-	3		
	PC10. Apply smoothing techniques using hand tools to enhance the surface finish of water hyacinth items.	-	3		
	PC11. Trim edges of products to ensure uniformity and neat appearance.	-	3		
	PC12. Assemble components into completed products with precision and care.	-	3		
	PC13. Package water hyacinth products using appropriate materials to ensure protection and presentation.	-	3		
	PC14. Label products clearly with relevant information, such as brand name, material used, and care instructions.	-	3		
	PC15. Market products by creating attractive product displays for local fairs, exhibitions, or online platforms.	-	4		
	PC16. Promote products using social media, including creating engaging posts and responding to customer inquiries.	-	4		
	PC17. Record sales data and customer feedback to assess the effectiveness of marketing strategies and make improvements.	-	4		

Annexure 6: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET “Guidelines for Blended Learning for Vocational Education, Training & Skilling” available on:

<https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☒ Theory/ Lectures - Imparting theoretical and conceptual knowledge		
2	☒ Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☒ Showing Practical Demonstrations to the learners		
4	☒ Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training		
5	☒ Tutorials/ Assignments/ Drill/ Practice		
6	☒ Proctored Monitoring/ Assessment/ Evaluation/ Examinations		
7	☒ On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training		

Annexure 7: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

1. Assessment System Overview:
 - Batches assigned to the assessment agencies for conducting the assessment on SDSM/SID or email
 - Assessment agencies send the assessment confirmation to VTP/TC looping SCGJ
 - Assessment agency deploys the ToA certified Assessor for executing the assessment
 - SCGJ monitors the assessment process & records
2. Testing Environment:
 - Confirm that the centre is available at the same address as mentioned on SDMS or SID
 - Check the duration of the training.
 - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
 - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
 - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
 - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
 - Check the availability of the Lab Equipment for the particular Job Role.
3. Assessment Quality Assurance levels / Framework:
 - Question papers created by the Subject Matter Experts (SME)
 - Question papers created by the SME verified by the other subject Matter Experts
 - Questions are mapped with NOS and PC
 - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
 - Assessor must be ToA certified & trainer must be ToT Certified
 - Assessment agency must follow the assessment guidelines to conduct the assessment
4. Types of evidence or evidence-gathering protocol:
 - Time-stamped & geotagged reporting of the assessor from assessment location
 - Center photographs with signboards and scheme specific branding
 - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
 - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos
5. Method of verification or validation:
 - Surprise visit to the assessment location
 - Random audit of the batch

- Random audit of any candidate
- 6. Method for assessment documentation, archiving, and access
 - Hard copies of the documents are stored
 - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
 - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

On the Job:**OJT Monitoring Report**

- As in Green Jobs Sector, reproducing the evidence for assessment is not feasible due to constraints like cost, confidentiality and controlled environment, every
- Apprentice is required to record the evidences performed during the OJT and the same gets authorized by his/her supervisor.
- The evidence recording is done in a structured monitoring report, termed as OJT Monitoring report.
- During the OJT, every trainee is required to fill the OJT monitoring report which is required to be signed by his/her supervisor.
- Towards the end of OJT period these reports are submitted with the HR department of company
- These duly submitted reports are then verified by an Industry nominated assessor for verification of evidence.

Theory, Practical & Viva:

- Scope – Is used to test the knowledge and understanding and skills acquired during the OJT as well as to conform the OJT monitoring report.
- Some personality traits and generic skills (such as – promptness, sharpness, communication skills, depth of knowledge, comprehension, presentation, patience etc) can also be tested, which is also required for the QP.
- Tools – The assessment's questions should be aligned with the Qualification Pack, covering the PCs. There will be summative assessment at the end of the OJT.
- Method – Direct questions open and close ended questions, situation-based questions, analytical questions, and decision-making based questions for Viva, MCQ for the theory and performing QP related operations for practical. Different questions in theory, practical and viva are included to test relevant PCs from the QP
- Analysis – Assessor draws a spectrum of ready answers to be expected from trainee for Viva. This reduces effect of subjectivity of the assessor. Comparative
- Quality of trainees within a batch or different institutes can be gauged. The skill is gauged by observing the practical work.

Execution of OJT Assessment:

- HR department hands over the individual OJT monitoring report with Industry nominated assessor and schedules an assessment meeting for each trainee.
- Industry nominated assessor assesses each trainee based on OJT monitoring report, viva on each PC and also takes into account attendance of each trainee towards the end of the OJT period.
- The OJT marks are compiled for each NOS by the Industry nominated assessor and submitted with HR department of company.
- The OJT assessment results are then sent to SCGJ by HR department of company in a sealed envelope for compiling the assessment results in case of offline assessment.

Annexure 8: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

Annexure 9: Career Progression and OM

