**NSDA Reference**

To be Added by NSDA

CONTACT DETAILS OF THE AWARDING BODY FOR THE QUALIFICATION

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| 1. **Name and address of awarding body:**   **National Academy of RUDSETI**  **Chitrapur Bhavan**  **15th Cross, 8th Main**  **Malleswaram**  **Bengaluru- 560 055**  **Ph: 080- 2346 2875**  **Email:** [**info@rudsetacademy.org**](mailto:info@rudsetacademy.org)   1. **Name and contact details of the Individual dealing with the submission:**   **Name: Sri. R. R. Singh**  **Position in the Organization**: **Director General**  **Address:** Same as above  **Email:** [**dg@rudsetacademy.org**](mailto:dg@rudsetacademy.org)   1. **List of Documents submitted in support of the Qualifications file (Annexure)** 2. **About National Academy of RUDSET** 3. **RUDSETI Model of Entrepreneurship Development** 4. **Curriculum document /Syllabus** 5. **Session Plan** 6. **Bank wise list of RSETIs** 7. **Research Studies regarding RUDSETI/RSETI** |

# SUMMARY

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| **Qualification Title:** **Pissiculture** **(Inland Fisheries)** |
| **Qualification Code: NARQ30059-AGRI** |
| **Nature and Purpose of the Qualification:**  To train farmers / unemployed youth to set up their own Inland fishery unit as a business enterprise. According to NSSO Data (2013) among workers in rural areas, 54.2% are self-employed and 38.6% work as casual labor, where as only 7.2% have regular wage employment. Most of the self employed are engaged in agriculture and have very little formal skills both in farm and non-farm occupations. Hence, the need to skill rural youth so that the next generation of workers become skilled, productive and contribute positively for the growth of the economy. |
| **Body/bodies which will award the qualification:**  **National Academy of RUDSETI, Bengaluru**  The National Academy of RUDSETI was established in April 2009 in response to an emerging need for capacity building and mentoring of more than 585 Rural Self Employment Training Institutes (RSETIs) established in each district of the country as joint venture between different Banks and the Ministry of Rural Development, Government of India to work as National Level Resource Organization for RUDSETIs and RSETIs and other similar type of Institutes   1. To design and conduct training programmes and undertake project in Enterprise Promotion, Rural Development, Technology Transfer and imparting Human Resource Development (HRD) concepts. 2. To conduct research and development work in the field of Entrepreneurship Development 3. To act as a advisory to policy makers relating to Enterprise Promotion and Rural Development (for Government /NGOs/ Other Organizations / Financial Institutions /Corporate Entities / Central Secretariat, RUDSETI) 4. To take up any other activities connected with Rural Development and Entrepreneurship Development and Rural Development. 5. To provide Consultancy and Counseling Services in the field of Entrepreneurship Development and Rural Development. 6. Any other activity aimed at Development of Entrepreneurship, Rural Development and serving the society at large.   **(See Annexure I for a complete profile of NAR and Annexure II for RUDSETI model of Entrepreneurship Development)** |
| **Body which will accredit providers to offer courses leading to the qualification:**    National Academy of RUDSETI, Bengaluru |
| **Body/bodies which will be responsible for assessment:**    National Academy of RUDSETI, Bengaluru |

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| **Occupation(s) to which the qualification gives access:**  This qualification will enable the trainee to establish and run a inland fishery culture unit with provision to produce fishes. Besides skills in the field of pissiculture, the qualification will give access to the trainee to:   1. Acquire and internalize the required Entrepreneurial Competencies (skill as well as attitude). 2. Knowledge and techniques for identifying the business opportunities, selection of an entrepreneurial activity, launching of the venture and skills for managing a Micro Enterprise. 3. Build confidence in one’s own abilities |
| **Proposed level of the qualification in the NSQF:**  Level 3 |
| **Anticipated volume of training/learning required to complete the qualification:**  80 hours  (See Annexure III & IV for Curriculum & Session Plan) |
| **Entry requirements / recommendations:**  Male or Female Candidates in the age group of 18 to 45 years having inclination for taking up inland fisheries as a self employment venture. Candidates with agricultural background are preferred. |
| **Progression from the qualification:**  This qualification will enable the trainees to become Self Employed by establish inland fisheries unit. If the candidate is able to successfully do this he/she can expand the Pissiculture business and also provide employment to more persons. |
| **Planned arrangements for the Recognition of Prior learning (RPL):**  Not applicable |
| **International comparability where known:**  **------** |

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| **Formal structure of the qualification** | | | |
| **Pissiculture (Inland Fisheries)** | **Mandatory/**  **Optional** | **Estimated Size (learning hours)** | **Level** |
| **A - Entrepreneurship**   1. Importance of Self Employment & developing self confidence 2. Entrepreneurial competencies 3. Banking, insurance and management   **B. Domain/Technical Knowledge**   1. Introduction to inland fisheries, description and scope, 2. Construction of pond, 3. Knowledge on preparation of pond for fish 4. Knowledge of seed stocking and fish seed rearing 5. Knowledge of table fish production 6. Knowledge of breeding methodology of major fish species 7. Ornamental fish culture 8. Culture of alternate fishes, pangasis and Nile tilapia, description, methodology, economics and viability 9. Culture of alternate fishers, prawn and fresh water pearl culture - description, methodology, economics and viability 10. Culture of alternate fishers, prawn and fresh water 11. Knowledge of cage culture of various fish specifies for commercial production 12. Common diseases and their management 13. Processing and product development of inland fisheries 14. Knowledge of canning, packaging technology | Mandatory  Mandatory | 12 hours  24 hours  (Theory) | Level 3  Level 3 |
| **Professional Skills**   1. Construction of pond 2. Preparation of pond for fish 3. Seed stocking and fish seed rearing 4. Table fish production 5. Breeding methods 6. Fish nutrition and feed technology 7. Culture of alternate fishes, Pangasius and Nile tilapia 8. Culture of alternate fishers, prawn and fresh water pearl culture 9. Cage culture of various fish specifies for commercial production 10. Common diseases and their management 11. Processing and product development of inland fisheries 12. Canning, packaging technology | Mandatory | 30 hours | Level 3 |
| **Core Skills**   1. Time management 2. Business Management skills | Mandatory | 10 hours | Level 3 |
| **Admission & Examination** | Mandatory | 4 hours | - |
| **Total Duration of the Course** 80 hours | | | |

**SECTION 1 - ASSESSMENT**

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| **Body/Bodies which will carry out assessment:**  This qualification will be used by 585 RSETIs **(list is furnished in Annexure V**) across the country which has been established in each district. These RSETIs are controlled by commercial banks (both Government owned and Private). NAR is a separate body and there is no linkage in management and control between the RSETIs offering the training and NAR which will conduct the assessment. The assessment of outcome of the qualification will be done by NAR which is an independent organization. It is run by professionals who are expert in rural entrepreneurship development. In NAR there will be a separate vertical similar to ‘Controller of Examinations’ in Universities, which will conduct the assessment through its empanelled assessors at the RSETI level. The empanelled assessors will be provided training by NAR.  **How will RPL assessment be managed and who will carry out?**  Not Applicable  **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 NSQF.**  Assessment tools for the Qualification are decided on the basis of composition of knowledge and skill in that particular Course. All assessments shall have at least two tools viz.1. Practical test and 2. Written test and/or Viva.   1. **Assessment process:**   The assessment will be primarily carried out by collecting evidence of competence gained by the trainees by observing them at work, asking questions and initiating formative discussions to assess understanding and by evaluating their practical work. The question papers for the theory Examinations contain objective/descriptive type questions, drawings etc.  **Minimum pass mark:** Overall 50% of marks allotted   1. **Testing and certifications for the course:**   Arrangements will be made by NAR to ensure that the evidence on which assessment / judgments made are comparable for all trainees and that the judgments made does not vary from assessor to assessor. Arrangements relating to the conduct and monitoring process of assessment are as follows:   * Questions papers will be prepared by NAR in consultation with vocation experts in the field. * Structured tests at the Institute level will be administered in the presence of the assessors. * The tests will be supervised and monitored at every Centre * Theory and practical Examinations will be carried out with invigilators/examiners with the overall supervision of the certified assessors. * Examiners called for evaluation of practical will have technical expertise in the field |

**ASSESSMENT EVIDENCE**

**Assessment & Evaluation:**

The trainees will be assessed through a structured test process. The test will comprise of both written, practical and viva voce. Standard question paper will be devised keeping in view the expected outcome of the training. The test will be administered by certified and empanelled assessors at RSETI level. The technical skill component will be tested through practical examination. Both of these tests will be followed by personal interview wherein the entrepreneurial competencies will be tested. The extent of internalization of the inputs given will be tested. The face-to-face interview will assess the overall ability of the trainee concerned to perform the defined job role including behavioral aspects of entrepreneurial competencies. On getting the results of these tests from the assessors at ground level, a senior expert in entrepreneurship at NAR, Bengaluru will review the marks and on his validation, system generated certificates will be issued to the successful candidates online.

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| **Assessable Outcome** | **Performance Criteria** | **Assessment Criteria** | | |
| **Total** | **Theory** | **Practical** |
| 1. Candidate is clearly able to differentiate between Wage employment, Self-employment and Entrepreneurship 2. Understand, appreciate and develop the self-confidence for embarking on self-employment 3. Understand and internalize entrepreneurial competencies and know their importance for becoming a successful entrepreneur. 4. Trainee is able to appreciate need for continuous growth and expansion of an enterprise 5. Trainee is able to analyze major trends in a given economic sector / sub-sector and identify Business Opportunities 6. Develop effective personal management skills like time management and communication skills. 7. Trainees are able to devise a simple marketing and sales strategies and plan for a small business 8. Trainees able to manage small team of workers required for managing a small business | **PC 1** – Understanding the Context and Need for Rural Entrepreneurship Development, Role of RSETIs | 1 | 1 | 0 |
| **PC 2** – Developing Self Confidence and Positive Attitude (Micro Lab & Tower Building) | 2 | 1 | 1 |
| **PC 3** – Comparative Advantages of Entrepreneurship and Self Employment over Wage Employment | 1 | 1 | 0 |
| **PC 4** - Understanding and internalizing entrepreneurial competencies | 5 | 2 | 3 |
| **PC 5** - Understanding the process of steps in Problem Solving | 2 | 1 | 1 |
| **PC 6 –** Time Management – Understanding of Basic Concepts and ability to manage time | 3 | 2 | 1 |
| **PC 7 –** Effective Communication Skills – Understanding of Basic Concepts and ability | 2 | 1 | 1 |
| **PC 8** – Ability to assess market conditions and indentify appropriate business opportunities | 2 | 1 | 1 |
| **PC 9** – Understanding of Banking & Insurance and how it can help a start up enterprise | 2 | 1 | 1 |
| **PC 10** – Ability to Prepare Business Plan based on data obtained from Market Survey | 10 | 6 | 4 |
| **PC 11** – Understanding licensing and regulatory aspects of launching an enterprise. | 2 | 1 | 1 |
| **PC12** – Ability to Maintain Books of Accounts and Develop Financial Statements for a Small Business | 5 | 3 | 2 |
| **PC 13** – Understanding and ability for Inventory and Materials Management | 5 | 3 | 2 |
| **PC14** – Understanding and ability for Sales and Marketing | 5 | 3 | 2 |
| **PC 15** – Human Resource Management – Understanding of Concepts and ability to manage a team | 5 | 3 | 2 |
| **PC16** - Understanding of Basic Laws relating to MSMEs | 5 | 3 | 2 |
| **PC17** – Growth and Strategic Planning - Understanding of Concepts | 3 | 3 | 0 |
| **Total REDP** | | **60** | **36** | **24** |

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| **B. Technical Knowledge**  **Able to understand**   1. Inland fisheries and its scope 2. Fish culture – cultivable fish species, carps and alternate fishes 3. Construction of pond 4. Preparation of pond for fish 5. Seed stocking and fish seed rearing 6. Table fish production 7. Breeding methodology of major fish species 8. Ornamental fish culture 9. Fish Nutrition and feed technology 10. Culture of fish food organisms 11. Culture of alternate fishes – pangasius & Nile tilapia 12. Culture of alternate fishes – pawn and fresh water pear culture 13. Cage culture of various fish species 14. Common diseases of fishes and their management 15. Processing and product development of inland fisheries 16. Knowledge of canning, packaging technology   **Technical Skills**  **Candidate is able to do**   1. Construction of pond /Preparation of pond for fish 2. Seed stocking and fish seed rearing 3. Table fish production 4. Breeding methods 5. Fish nutrition and feed technology 6. Culture of alternate fishes, pangasis and Nile tilapia 7. Culture of alternate fishers, prawn and fresh water pearl culture 8. Culture of alternate fishers, prawn and fresh water 9. Cage culture of various fish specifies for commercial production 10. Common diseases and their management 11. Processing and product development of inland fisheries 12. Canning, packaging technology | **Performance Criteria** | **Assessment Criteria** | | |
| **Total** | **Theory** | **Practical** |
| **PC1** The Role of aquaculture | 3 | 3 | Nil |
| **PC2** History of aquaculture | 3 | 3 | Nil |
| **PC3** Integrated aquaculture systems | 3 | 3 | Nil |
| **PC4** Tropical Fish Ecology: | 3 | 3 | Nil |
| **PC5** Intensive commercial aquaculture | 3 | 3 | Nil |
| **PC6** Site selection and planning | 3 | 3 | Nil |
| **PC7** Environment impact assessment | 3 | 3 | Nil |
| **PC8** Hatchery Technology | 3 | 3 | Nil |
| **PC9** Tilapia Farming: Status and Trends | 3 | 3 | Nil |
| **PC10** Feeding fish - how, where, when | 3 | 3 | Nil |
| **PC11** Tilapia Grow-out Systems / Tilapia Hatchery | 3 | 3 | Nil |
| **PC12** Fish Processing, Food Quality & Safety | 3 | 3 | Nil |
| **PC13** Feeds & Feeding Management. | 3 | 3 | Nil |
| **PC14** Water Quality Monitoring and Management | 3 | 3 | Nil |
| **PC15** Store animal feed safely according to the manufacture date | 3 | 3 | Nil |
| **PC16** Brood fish maturation and breeding | 3 | 3 | Nil |
| **PC17** Larval rearing | 3 | 3 | Nil |
| **PC18** Nursing techniques | 3 | 3 | Nil |
| **PC19** Post harvest and processing | 3 | 3 | Nil |
| **PC20** Site selection | 3 | 3 | Nil |
| **PC21** Lay-out and designing structures | 3 | 3 | Nil |
| **PC22** Hapa set-up, cleaning and maintenance | 3 | 3 | Nil |
| **PC23** Biological and slow-sand filters | 3 | 3 | Nil |
| **PC24** Pumps, aerators and other equipment  / Water supply and drainage canals | 3 | 3 | Nil |
| **PC25** Monitor the condition of feed and water and take the appropriate action when problems occur | 4 | 4 | Nil |
| **PC26** Basic principles of fish nutrition | 4 | 4 | Nil |
| **PC27** Feeding behavior of fish species | 4 | 4 | Nil |
| **PC28** Nutrient requirements of various species | 4 | 4 | Nil |
| **PC29** Feed ingredients and their composition | 4 | 4 | Nil |
| **PC30** On-farm feeds and feed ingredients | 4 | 4 | Nil |
| **PC31** Knowledge of canning, packaging | 4 | 4 | Nil |
| **PC32** Knowledge of diseases and their management | 4 | 4 | Nil |
| **PC33** Construction of pond | 4 | 1 | 3 |
| **PC34** preparation of pond for fish | 4 | 1 | 3 |
| **PC35** Seed stocking and fish seed rearing | 4 | 1 | 3 |
| **PC36** Table fish production | 4 | 1 | 3 |
| **PC37** Able do brood preparation | 4 | 1 | 3 |
| **PC38** Able to do harvesting | 4 | 1 | 3 |
| **PC39** Able to do cleaning | 4 | 1 | 3 |
| **PC40** Able to MT feed preparation, feeding | 4 | 1 | 3 |
| **PC41** Nursing, grading, conditioning, packing & selling | 4 | 1 | 3 |
| **Total Technical Knowledge and Skills** | | **140** | **113** | **27** |
| **Total for the Entire Course** | | **200** | **149** | **51** |
| **Means of Assessment - Written Test and Viva Voce, Pass Percentage = 50 % of the total Marks** | | | | |

# SECTION 2 - EVIDENCE OF LEVEL

Option B: Key Requirements of the Job Role

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| **Title of the Qualification: Pissiculture (Inland Fisheries)** | | | | |
| **NSQF LEVEL – 3** | | | | |
| **Process Required** | **Professional Knowledge** | **Professional Skills** | **Core Skills** | **Responsibility** |
| **Person may carry out a job which may require limited range of activities routine and predictable** | **Basic facts, process and principle applied in trade of employment** | **Recall and demonstrate practical skill, routine and repetitive in narrow range of application, using appropriate rule and tool, using quality concepts** | **Language to communicate written or oral, with required clarity, skill to basic arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment** | **Under close supervision.**  **Some responsibility for own work and learning** |
| Ability to do the routine work and maintain inland fish farming | Factual knowledge about the different breeds, feed and fodder  and adopt the best practices of inland fisheries | Ability to prepare and mix feed and fodder, maintenance of health and hygiene in fisheries. | Ability to start inland fishery unit. This can be imparted though training. | Since this training leads to self employment, responsibility for won work and learning is to be present and demonstrated |

# SECTION 3 - EVIDENCE OF NEED

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| **What evidence is there that the qualification is needed?**  Entrepreneurship has been embedded in the Indian genius and is a part of its tradition. India traditionally has been an entrepreneurial society. Traditionally, the entrepreneurship of many communities has been facilitated principally by the successful use of informal ‘entrepreneurial ecosystems’ and interdependent business networks. Further, there is also a rich tradition within the Indian Diaspora, spanning the past several hundred years, whose spirit of enterprise is legion.  Entrepreneurship in India occurs in ‘far more encompassing and far reaching ways than in developed countries’, and could therefore be far more complex, for there is so much more that needs to be done. Commentators today celebrate the ubiquitous Indian attitude of ‘*Jugaad’* (a Hindi word roughly translated as ‘creative improvisation) tool to somehow find a solution based on a refusal to accept defeat, and calling on initiative, quick thinking, cunning and resolve to quickly fulfill market demands at the lowest possible prices) as an entrepreneurial trait that has been as much a part of everyday Indian living as its rich tradition of philosophy and speculation.    Farming and harvesting of fish is done on a large scale in different parts of the world as fish is one of the most delicious and healthy food item. Pissiculture alias Fish Farming is the breeding, rearing and transplantation of fish by artificial means. It is a scientific technology for getting maximum fish production from a pond / tank or other enclosures through utilization of available food organisms supplemented by artificial feeding. The word Pissiculture is derived from the Latin word 'piscis' meaning 'fish' and 'culture' means 'rearing'. Pissiculture can also be defined as a branch of animal husbandry that deals with rational deliberate culturing of fish/ fishes to marketable size in a controlled water body. It is the  principal form of [Aquaculture](http://career.webindia123.com/career/options/basic_environmental_science/aquaculture/intro.htm)  In order to give impetus to this growing demand of first generation entrepreneurs to gain formal training in entrepreneurship knowledge and skills RSETIs have been established by various Banks. Ministry of Rural Development gives part funding of the training. The RSETIs have been established on the RUDSETI models which have been proved very effective in eradicating the problems of unemployed youth. The RUDSETI model of developing rural entrepreneurs has been well researched and documented (please see Annexure VI). The trainings by these Institutes are unique in the sense they are demand based. The Institutes have got the experience of conducting these Programmes over the years. |

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| **In order to identify the potential programmes as per the needs of the unemployed youth, a Committee of General Managers of top 5 RSETI sponsoring Banks has been constituted. The General Managers of State Bank of India, Punjab National Bank, Bank of Baroda, Central Bank of India and Bank of India are the members of this Committee. In addition, Executive Director, RUDSETI, National Director for RSETIs and Director General, National Academy of RUDSETI who got rich field experience also joined this Committee**. **The above Committee met at Mumbai on 7th November 2016. After thorough discussions and based on the past experience the Committee short listed potential /need based courses for training rural unemployed youth in the RSETIs. The training on ‘Pissiculture is one such shortlisted need based training.** |

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| **What is the estimated uptake of this qualification and what is the basis of this estimate?**  Presently there are 586 Rural Self Employment Training Institutes (RSETIs) across the country sponsored by various Banks. National Academy of RUDSETI is the anchoring Institution which designs and approves the training programmes being conducted by these RSETIs. The Training Modules are demand driven and are vetted by National Academy of RUDSETI, having experience of running similar programmes by the RUDSETIs since over three decades. Dairy Farming and Vermi-composing training is one of the popular programmes in the RSETIs. Candidates trained in this activity have successfully established their units by availing credit facilities or investing own funds. The RSETI MIS is enabled to record the settlement of candidates by capturing of action photos, pass book entries, loan sanction letter copy etc. which is available for verification. The number of trainees under this qualification during the past three years is as under:   |  |  |  | | --- | --- | --- | | **FY** | **No. of Training Programmes** | **Number of Candidates** | | 2013-14 | 105 | 2933 | | 2014-15 | 126 | 3276 | | 2015-16 | 106 | 2879 |     Cumulative settlement rate for the above training is 63% and observing the above trend, the candidates trained under the above qualification, the number of candidates to be trained in the next three years is estimated at more than 10,000. |

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| **What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?**    This Qualification offers a combination of technical knowledge and skills in Pissiculture along with entrepreneurial knowledge and skills. This is a unique short duration course for rural people interested in taking up Pissiculture. |

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| **What Arrangements are in place to monitor and review the qualification (s)? What data will be used and at point will the qualification (s) be revised or updated?**  National Academy of RUDSETI has put in place a robust MIS for RSETIs. Comprehensive data (Course wise/Bank Wise/State Wise) for all RSETIs is maintained by NAR in the said MIS. Entry level data include the photograph of the candidate other basic details. Course modules are made available in the MIS and the website of NAR. Training logs and Post Programme Reports with action photographs of the training are also made available in the MIS. Details of Settlement and credit linkages are uploaded in the MIS with action photos and documentary proofs. The State Directors of RSETIs are also visiting the RSETIs every quarter for reviewing the quality of training / settlement. Officials from the controlling offices of the Banks and NAR are also making periodic visits to the RSETIs for reviewing the activities. MIS reports are used for viewing the settlement of the trained candidates, their level of income and employment generation by them. Feedback obtained from the trained candidates, RSETI sponsoring bank and other stake holders are used to review/update the course. |

# SECTION 4 - EVIDENCE OF RECOGNITION AND PROGRESSION

**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?**

The candidates who undergo the training programme on Pissiculture will have the opportunity to take up other related activities such as poultry, goat rearing, sheep rearing etc. and increase their income in due course. This will also help in creating incremental employment opportunities in rural areas since the entrepreneur will be able to give employment to more people in the area. The entrepreneur also may take up advanced Pissiculture Course and other skill up-gradation / growth programmes offered by RSETIs.