**ANNEXURE B**

**BIOCONTROL RESEARCH, IMPLEMENTATION AND MASS REARING**

**PROJECT SPECIFICATIONS**

**Project 1: Freshwater habitats**

1. **SCOPE AND EXTENT OF WORK**

**Section 1:   Pre-release studies**

The pre-release studies will include exploration work and quarantine testing in South Africa on new biocontrol agents on target weeds that have been prioritized by the Department of Forestry, Fisheries and the Environment (DFFE) based on the 20 (twenty) weeds identified by Canavan *et al*., 2021 ( Annexure G). The list is as follows:

1. *Sagittaria platyphylla* – Delta arrowhead
2. *Pontederia cordata* – Pickerel weed
3. *Iris pseudacorus* – Yellow flag
4. *Salvinia minima* – Common Salvinia
5. *Nymphaea mexicana* – Mexican water lily

The deliverable on this section will be progress achieved per plant species in the quarter.

**Section 2: Post-release evaluation**

The post release evaluation section deals with:

1. quantifying the population impact of the biological control agents released in the past
2. socioeconomic studies and
3. recovery studies.

The priorities for the Department will be the impacts of the biocontrol agents released on the following AIS and their interactions with each other and the impact of integrated sub-lethal chemical control with biocontrol.

1. *Pontederia crassipes* – Water Hyacinth
2. *Egeria densa* – Dense Water Weed
3. *Salvina molesta* – Kariba weed
4. *Azolla cristata* – Mexican azolla
5. *Pistia stratoites* – Water lettuce

The deliverable on this section will be progress achieved on points i – iii per quarter.

**Section 3: Mass rearing**

The mass rearing of the agents identified in section 2 over the 5-year period and agents in section 1 as they become available for release. See table 1 for estimated number of agents per quarter:

Table 1: Estimated number of biocontrol agents per species per quarter.

|  |  |  |  |
| --- | --- | --- | --- |
| **Plant species** | **Estimated no. agents/quarter** | **Total/year** | **Total** |
| *Pontederia crassipes* – Water Hyacinth | 163 750 | 655 000 | 3 275 000 |
| *Egeria densa* – Dense Water Weed | 10 000 | 40 000 | 200 000 |
| *Salvina molesta* – Kariba weed | 11 250 | 45 000 | 225 000 |
| *Azolla cristata* – Mexican azolla | 500 | 2 000 | 10 000 |
| *\*Salvinia minima* – Common Salvinia | 10 000 | 40 000 | 200 000 |
| *Myriophyllum aquaticum –* Parrots feather | 2 000 | 8 000 | 40 000 |
| *Pistia stratoites –* Water lettuce | 15 800 | 63 200 | 316 000 |

\*This deliverable is dependent on the approval for release

The deliverable under this section will be the number of agents reared per species per quarter.

This deliverable needs to be clearly identified and mentioned on the quarterly report.

1. **COMPETENCY AND EXPERTISE REQUIREMENTS**
2. The bidder is required to demonstrate that they have past and/or ongoing experience and competency in the fields of biocontrol, research, mass rearing or similar.
3. The bidder needs to provide evidence of previous projects successfully completed, including project values, and track records of deliverables achieved.
4. The bidder is required to provide evidence that their team has the relevant technical experience, in research and mass rearing of biological control agents or similar field, required to ensure the deliverables of this work.
5. The bidder is required to provide evidence that their core team has the relevant qualifications required to ensure the efficient delivery of the work.
6. **PROJECT MANAGEMENT AND REPORTING**

The Project Manager shall do the ongoing management of the Service Level Agreement (SLA)/Memorandum of Agreement (MOA).

The appointed service provider shall submit four (4) quarterly reports per year for each of the three (3) EP deliverables as follows; 1. Pre-screening studies, 2. Post-release evaluation and, 3. Mass rearing. Therefore, twelve (12) quarterly reports in total per year will be required.