

**GRANT NUMBER:** 42539-1

**PROJECT TITLE:** MAPPING THE DISTRIBUTION AND  
MANAGEMENT OF INVASIVE KONGWA  
WEED (*ASTROPOMOEON HYOSCYAMOIDES* VOTKE VERSC)

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**Progress Report:** March - September 2024

## 1.0 Background

*Astripomoea hyoscyamoides* VatkeVerdc, commonly referred to as the Kongwa weed and locally known as “Mahata”, is an invasive plant species posing significant challenges in central Tanzania. The weed causes negative consequences to native species, ecosystems and has negative consequences to the pastoralists and agriculturalists. The semi-arid region of central Tanzania has been highly infected by Kongwa weed, which has a tendency of aggressive invasive plants that out-compete the native species. The weed cause adversely affects food security, biodiversity, and human as well as livestock health, therefore affecting the community at large. Little information has been documented about the extent of weed spread, its effects on the agricultural and the biodiversity and the control mechanisms in the region. Due to this, in this study we aimed to address the following objectives;

1. Mapping the distribution of *Astripomoea hyoscyamoides vatke verscin* in Dodoma Region central Tanzania.
2. Determination of the impacts of *Asrtipomoea hyoscyamoides vatke versc* in biodiversity
3. Assessment of the social economic impact of *Astripomoea hyoscyamoides vatke versc* on the livelihood of farmers and pastoralists
4. Comparison of the effectiveness of biological and cultural control of *Asrtipomoea hyoscyamoides vatke versc*

### Activities conducted in the period of March-September 2024.

During the first and second quarter of the project implementation, we have conducted several activities as tables below;

Objective	Activities	Implementation status			Comments
		Not achieved	Partially achieved	Fully achieved	
Mapping the distribution of <i>Astripomoea hyoscyamoides vatke verscin</i> in Dodoma Region central Tanzania.	Project inception			√	Project inception phase has successfully completed, which involved defining the project's scope, revisiting objectives, and stakeholders, and developing a comprehensive project plan. All foundational elements were established, resources allocated, and the project team and stakeholders were aligned and prepared for the execution
	Mapping distribution of <i>Astripomoea</i>			√	Six districts and one town council of the Dodoma

	hyoscyamoides vatke verscin in Dodoma region central Tanzania.				Region have been visited, and mapping of the astropomea conducted. In all seven locations, 6 (Kongwa, Mpwapwa, Chamwino, Bahi, Chemba Districts and Dodoma town council Kongwa weed were present but in different intensity) while in Kondoa district there were no invasion of the weed.
	Preparing Astripomoea hyoscyamoides vatke verscin distribution map in central Region Tanzania		√		We have the GPS coordinates of the distribution of the weed in central Tanzania.  We have begun preparing a distribution map, which indicates that the districts least affected by the weed are Mpwapwa and Chemba, while Kondoa shows no signs of weed infestation. Additionally, we are analyzing the trends in weed distribution to assess its progression over time
Determination of the impacts of Asrtipomoea hyoscyamoides vatke versc in biodiversity	Site spots for diversity analysis			√	Two sites have been identified in Kongwa District for diversity analysis. Description of the sites, one is highly infected with the weed and adjacent site with minimal or not infected with the weed. Selected sites are Chunya and Machenje.
	Sampling of diversity data			√	Sampling for biodiversity has been carried out in both highly affected and least affected areas. We have now begun the identification process
Assessment of the social economic impact of Asrtipomoea hyoscyamoides vatke versc on	Selection of survey villages			√	Four villages were selected for conducting social impact assessment of kongwa weed on the livelihood of farmers and pastoralists. Selected villages Vilundilo and Machenje (Kongwa District) and Kidoka and Kambi ya

the livelihood of farmers and pastoralists					Nyasa villages (Chemba District).
	Questionnaire design and pre-testing, correction, and adding inputs			√	Questionnaire Prepared and pre-testing conducted.
	Assessing the social economic impact by conducting interviews, focused group discussion in villages affected by the weed.	√			
Comparison of the effectiveness of biological and cultural control of <i>Asrtipomoea hyoscyamoides</i> vatke versc			√		Preparation of bioherbicides by harvesting the leaves and seeds of <i>Azadirachta indica</i> and dry then have started.



Pic: 1. Project Inception for Villagers and leaders (March 2024)



Pic. 2: Kongwa Ranch area affected by Kongwa weed. ( April 2024)



Pic. 3: Setting of Pan traps and pitfall traps (July, 2024)



Pic. 4: Sorting and preserving collected invertebrates (July, 2024).



Pic. 5: Preparation of leaves and seed of *Azadirachta indica*, bio-herbicides (September 2024)

I submit.

Upendo Richard

Project PI.