Swot Analysis: Black-throated Finch

Following SWOT analysis was examined the strength, weaknesses, opportunities, and threats which influence for the Black-Throated finch due to the Adani mining project.

STRENGTH

- Water Sources

The Black-Throated Finch life cycle depends on the availability of water resources (permanent and seasonal water bodies). They used to drink water from natural and artificial water sources like stock troughs, wetlands, dams, and creeks. They need to drink water daily and numerous times in dry seasons.

Permanent water is crucial resources in dry seasons. During those periods, artificial water resources are a significant source for them (springs, troughs, and dams). Imperial water sources are playing an important thing in surviving their life cycle in wet seasons. All those small pools are let them access feeding sites. Because large water bodies are not suitable for the finches to drink.

According to the ADANI survey details, Black-throated finch was observed in northern and southern part water bodies in the Mine site and 16 numbers water bodies are counted as a black-throated finch target area in wet and dry seasons. (Ltd, 2014)

- Trees

Black-throated finch nest site selection is highly related to tree locations than tree structures. Nests are constructing in tree hollows or trees. Individuals have used tree structures significantly including pendulous branches, bushy shrubs, hollow tree limbs, and base of active raptor nests.

According to BTF habitat, Finches create high proximity to their life cycle events such as nesting, water, and foraging resources. For example, most Finches make their nest away from 400m from water resources and foraging resources near to their nesting. They were not going to fly large distances in breeding seasons.

- Grass Species

The Black-throated finch mostly feed on fallen grass seeds including, Urochloa mosambicensis, Enteropogon acicularis, Panicum decomposition, Panicum effusum, Dichanthium sericeum, Alloteropsis semialata, Eragrostis sororia, and Themeda triandra. And during the breeding season when grass seeds abundant they forage into small areas which near nesting sites. These grass seeds are essential for surviving their life cycle strongly. (Australian government, 2009)

Therefore, a large area of foraging resources is need to be upkeep in the dry season for these

finch populations. In the Townsville region there are many numbers of foraging resources are faced in the bottleneck in the wet season.

WEAKNESS

- Habitat loss and habitat degradation

There are more species are living in the mine site approximately 400 to 500. (Australian government, 2009) Open cut and fragmentation of the mine site made disturbance to the species breeding and feeding patterns. Because of the construction and operational stage, most habitat areas were damaged. Due to the above circumstances following impacts can be happened to that Black-throated finch (BTF).

- Not discover suitable habitats and die.
- Find suitable habitat, already occupied by another black throated finch it can be increased carrying capacity
- Find suitable habitat, that is already occupied by BTF and transfer the original BTF (O'Shanassy, 2019)

According to statistical data, the mine will be disturbance 50,977 hectares of finch habitat. And 34,156 hectares will be completely cleared off. And also, 87km2 of habitat able to destroy due to the creation of open pits. As well as 61 km2 will be degraded due to underground mining (O'Shanassy, 2019). Following actions were caused to intention to loss and degradation of habitats of Black-throated finches.

- Clearing of grassland woodland
- Disrupting the natural flows of streams and rivers
- Excavation
- Burning and grazing
- Construction of roads
- Construction of temporary or permanent structures
- Increases in recreational activities and human traffic (Australian government, 2009)

According to the Environment science and policy journal,

“This black-throated finches are now found in only 12 percent of its historical range and coal mines approved between 2012 and 2015 will damage or degrade most of the high quality black-throated finch habitat”. (O'Shanassy, 2019)

- Direct Injury and mortality

Permanent and seasonal water sources are really essential for surviving their life. Due to the Carmichael mine, that site area can be polluted and pure water sources can be mixed with chemicals. Therefore, it will be damage for the lifecycle of BTF.

The Black-throated finch is used to make their nesting within 400m boundaries from the water sources. Because of the construction purposes, removal of trees can be directly damaging for them to maintain their connectivity with nest and water sources. Therefore, it will be a significant

impact on their life cycle process.

Decreasing availability, quality and variety of seeding grass species are significant impacts for BTF. Lesser impact, human and machine activity, and increased traffic may cause direct mortality of black-throated finches.

- Change hydrology and surface water

The outcome of the mine operations, removal of existing farm dams and cattle troughs are caused to change surface water quality.

OPPORTUNITIES

- Significant Impact Guidelines (DEWHA, 2009b)

Significant Impact Guidelines is an Australian Government policy statement. It was designed to investigate the impact of black-throated finches due to the Carmichael mine project. This guideline identified several components that need to be included in the project to minimize the effect of Carmichael mine.

- Commonwealth legislation

Commonwealth legislation is the environmental protection legislation and its objective is to protect the environment. According to the legislation Black-throated finch is nominated as endangered species under the EPBC Act and MNES. Therefore, this legislation informs project coordinators to avoid, manage and mitigate the impact which influences the Black-throated finch.

- Queensland Legislation

Black-throated finches are listed as endangered species in Nature Conservation Act 1992. Therefore before construction, the project needs to be taken permit as to disturb native endangered fauna under this act.

Under Vegetation Management Act 1999, this project needs to face an assessment provided by the sustainable planning regulation in 2009. Because Black-throated finches' life cycle depends on feeding and nesting. Due to the project activities that ecosystems can be changed and it will be negatively impacted for the species therefore, to identify the impact and knowing mitigation measures the project needs to face the assessment. (Ltd, 2014)

- National recovery plan

National recovery plans the main objective is to manage and protect the Black-Throated Finch and their habitat. According to the plan, the Carmichael mine project need to include and consider the aspect of the national recovery plan during the management stage of the plan.

THREATS

- Large scale wildfire

This can be happened in the dry season and just after the wet. Because of this wildfire, large ground cover can be damaged including preferred food species, grazing seeds, and trees. Those are essential to the remaining BTF life cycle.

- Increased exotic grassland and weed of key habitat area

This can be happened due to poor grassing management and direct replacement. As well soil disturbance and machinery also influenced to increased exotic grasslands. Due to that cases, it leads to barren land space. Because of that, black-throated preferred grasses can die. And it will be directly influenced by their lifestyle.

- Clearing that fragments the available feeding, watering, and nesting resources

Feeding, Nesting, and watering that all the resources are in easy proximity. In their home, they have easy mobility or accessibility to their essential needs and want. But clearing the fragments can be a direct threat to separate their resources into small particles. And increased the distance to the resources. Significantly it affects their whole life cycle.?

References

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3. O'Shanassy, K. (2019, January 30). Australian Conservation Foundation. Retrieved from Just 12 % of black-throated finch habitat remains: http://www.acf.org.au/black_throated_finch_habitat