

**Table 4: Study Site Mining and Environmental Characteristics**

Study Site	Initial Sapphire Exploitation	Mining Substrate	Local Environment	Environmental or Species Importance	Neighboring Protected Area
Andranodambo	1992	Hard limestone	<u>Primary:</u> dry spiny forest; gallery forests bordering rivers. <u>Secondary:</u> anthropogenic savannah and non-native cactus scrub.	<ul style="list-style-type: none"> <li>Southern spiny and gallery forests are the most threatened ecosystem in Madagascar.</li> <li>Mammals: 130 total recorded, M=12, E=2</li> <li>Birds: M=74, R=23</li> </ul>	none
Ambondromifehy	1996	Mixed: hard limestone, natural underground caves, and some rocky soil	<u>Primary:</u> dry deciduous forest; xerophytic plants growing over eroded limestone pinnacle formations ( <i>Tsingy</i> ); underground caves and rivers. <u>Secondary:</u> anthropogenic savannah and dry forest	<ul style="list-style-type: none"> <li>Mammals: 11 lemurs, 14 bats, 4 carnivores; R=8</li> <li>Birds: 96 total recorded, R=1, E=8</li> <li>Reptiles and Amphibians: 60 total recorded, R=12</li> <li>Plants: 330 spp in 77 families; R=10</li> </ul>	Ankarana National Park
Ilakaka-Sakaraha	1998	Sandy soil	<u>Primary:</u> tapia woodland; dry deciduous forest. <u>Secondary:</u> anthropogenic savannah	<ul style="list-style-type: none"> <li>Mammals: 8 lemurs, 2 carnivores; R=1</li> <li>Birds: at least 85, M=37, R=22, 1 locally endemic to Zombitse-Vohibasia N.P.</li> <li>Reptiles and Amphibians: 48 total recorded; R=2</li> <li>Plants: several locally endemic</li> </ul>	Isalo National Park (to the east) and Zombitse-Vohibasia National Park (to the west)
Ifanato	2004	Hard limestone	<u>Primary:</u> dry spiny forest; gallery forest along the Onilahy river; sacred lakes ( <i>Sept Lacs</i> ). <u>Secondary:</u> non-native cactus scrub or forest	<ul style="list-style-type: none"> <li>Southern Spiny and Gallery forests are the most threatened ecosystem in Madagascar.</li> <li>Mammals: 26 total recorded; M=21, E=4</li> <li>Birds: 79 total recorded; M=33, E=2</li> <li>Reptiles: 55 total recorded; M=50, E=4</li> <li>Amphibians: 6 total recorded; M=5</li> <li>Plants: 142 total recorded; M=16 genera</li> </ul>	Sept Lacs GELOSE (Community-Managed Forest)

M = number of species endemic to Madagascar found in the study site region

R = number of species endemic to the region of the study site

E = number of species classified as endangered or threatened found in the study site region