WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Gambusia	Refs	Guppy	Refs	Swordtails	Refs	Platys	Refs	Tilapia mariae	Refs
1 Yanal of Comment improve							! !				
1. Level of Current impact 1.1 Distribution							<u> </u>				
a. Distribution and abundance relative to Wet Tropics Bioregion							<u> </u>				,——
Established populations abut the Wet Tropics Bioregion	2		<u> </u>				<u>1</u>				J
	2						! !				ı
Established populations exist	10	10	88	10	111	10	111	10	111	10	112
b. Wet Tropics Bioregion Provinces in which species is present.							<u>i</u> !				
Kirrama-Hinchinbrook	4						!				
Paluma-Seaview	4										
Macalister	4			4	119		!			4	6
Bellenden Ker	4			4	119	4	119				
Atherton	4	4		4	111,3	4	119				
Herbert	4	4					<u> </u>				
Tully	4	4					<u> </u>	4	6		
Innisfail	4	4		4	111,3	4	119	4	128	4	112
Daintree-Bloomfield	4			4	91,3		<u> </u>				
Total		16	88	20	91,3	12	<u> </u>	8		8	
Present in all	40						i i				
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))											
Kirrama-Hinchinbrook (1x2)+(5x1)	7						i				
Paluma-Seaview (1x2)+(7x1)	9						i				
Macalister $(4x2)+(1x1)$	9						į				
Bellenden Ker $(4x2)+(2x1)$	10						į				
Atherton $(5x2)+(3x1)$	13			I			į				
Herbert $(8x2)+(5x1)$	21						į	i			
Tully (11x2)+(5x1)	27						į				
Innisfail (11x2)+(7x1)	29	29	88			29	119	29	128	29	112,118
Daintree-Bloomfield (12x2)+(6x1)	30			30	119		<u>i</u>				
							!				,
d. Distribution and Abundance						_					
Small populations, patchy distribution	5	5	88	5	111	5	111	5	111,128	5	112,118
Small populations, continuous distribution	10						l 				1
Large populations, patchy distribution	10						1				
Large populations, continuous distribution	20				_				_		
					ĺ				ĺ		
Total for Section 1.1	100	60	1	65	İ	56	i	52	İ	52	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Gambusia	Refs	Guppy	Refs	Swordtails	Refs	Platys	Refs	Tilapia mariae	Refs
			ļ				ļ.			!	
1.2 Direct effects on native species distributions and abundances							į			l	
Species has exhibited no detectable effect	1						<u> </u>				
Minor modification to native species distributions and abundances	10						<u>. </u>			!	
Moderate modification to native species distributions and abundances	20						I I			l	
Major modification to native species distributions and abundances	30						1			ļ	
Responsible for extinction of native species	50						1			1	
Impact Unknown	25	25		25		25	 	25		25	
1.3 Ecological interaction with vulnerable or endangered species				i			<u> </u>			j	
Species has no or little interaction with vulnerable or endangered species	1			I	<u> </u>		1			I	
	•			ľ			! !			 	
Species has minor interaction with vulnerable or endangered species	20						i i			1	
Species has moderate interaction with vulnerable or endangered species	30	30	88				1				
Species has major interaction with vulnerable or endangered species	50						1				
Ecological interaction unknown	25			25		25	! !	25		25	
Total for Section 1.1	100	60		65		56	<u>i </u>	52		52	
Total for Section 1.2 - 1.3	100	55		50		50	1	50		50	
Total for Section 1.2 - 1.5	100	33		30		30	i	30		30	
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	115		115		106	!	102		102	
							i				
2. Pest potential							<u> </u>				
2.1 Known level of impact in other natural areas				i			<u>i</u> 1	i		i	
Not known to cause impacts in any other natural areas	1			!			1			I	
Known to cause impacts in natural areas, but in other habitats and different climates	2				<u> </u>		1			!	
							<u> </u>				
Known to cause low impact in natural areas in similar habitats and climate zones	5			10	77.5	7.0		10		!	
Known to cause moderate impact in natural areas in similar habitats and climates	10	1.5	02.07.07	10	115	10	115	10	115		112
Known to cause high impact in natural areas in similar habitats and climate zones.	15	15	82,85,87				! !			15	112
2.2 Reproductive Potential						-	!			!	
a. Reproductive cycles							<u>i </u>			<u> </u>	
Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli	1						<u> </u>			i	
Seasonal	2						<u> </u>				
Multiple reproductive events/season	4										
Continuous breeding	5			5	115	5	115	5	6	5	6
Able to reproduce from one individual	5	5	54,82	3	113	3	113	J	<u> </u>	J	0
Unknown	3		34,02				 			i	
UIKIOWII							!			i	
b. Reproductive output							!			ļ.	
Low (<3 offspring/cycle)	1						!			į	
Moderate (3 – 10 offspring/cycle)	3						!			i	
High (>10/cycle)	5	5	82	5	115	5	115	5	111	5	115
Unknown	3						!			į	
							į	i		i	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Gambusia	Refs	Guppy	Refs	Swordtails	Refs	Platys	Refs	Tilapia mariae	Refs
c. Offspring viability			I I		I I) 	ļ			·
Low	1] []]		 	ļ ļ			1
Moderate	3		I I		I I		1	!			
High	5	5	82		i I		Ī	!		5	6
Unknown	3		i I	3	i I	3	i i	3			
Total for Section 2.2	15	15	I I	13	I I	13	1	13		15	
2.3 Dispersal ability			1 1 1	1	1 1 1		1 1	I			<u> </u>
Low potential for dispersal	5		i I) 		i	i		1	II
Moderate potential for dispersal	10		i i		i I		i	i			II
Dispersal associated with human movement	15	15	20	15	111,118	15	115	15	111		
High potential for dispersal	20	10			111,110	- 10	1110	10		20	115,118
Unknown potential	10				<u>.</u> ! !		<u>:</u> !	<u>'</u>		20	113,110
Total for Sections 2.1 – 2.3	50	45	! !	38	! !	38	!	38		50	
			1		l I		1				
2.4 Mode of Impact	_		! !	ļ <u>.</u>			:	i			
Degradation/deprivation of habitat	5		! !	5	6		!	5	115		
Competition for food and reproductive resources	5		! !	5	6		!	5	115		
Transmission of disease/parasites/other pest species	10		! !]]		<u> </u>	ļ.			
Direct predation of native animals	15		l i]]	15	115	!		15	6
More than one of the above modes	20	20	39,84,85		 		1 1	1		<u>'</u>	
2.5 Potential interactions with vulnerable or endangered species			! ! !		! ! !		1 	1			·
Species has little overlap with vulnerable or endangered species	2		! !		! i		!	Î		!	
Species has minor overlap with vulnerable or endangered species	10		İ		l		!	1			i
Species has moderate overlap with vulnerable or endangered species	20	20	88] 		!	ļ I			
Species has major overlap with vulnerable or endangered species	30		1] 		1	ļ			
Ecological overlap unknown	15		I I	15	I I	15	1	15		15	ı
Total for 2.4		20	i i	10	i i	15	i i	10		15	
Total for Sections 2.1 – 2.3	50	45	<u>!</u> :	38	! !	38	i i	38		50	;
Total for Sections 2.4 – 2.5	50	40	1 !	25	1 !	30	1	25		30	
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	85	I 	63	I L I	68	! !	63		80	
TOTAL FOR SECTION 2 FOLENTIAL EMPACE	100	0.5	! :	0.5	l I	00	 	03		00	
3. Feasibility of Control								i			
3.1General susceptibility to control			!				!				
a. Dispersal/mobility			: !		i		i i	i		1	1
Individuals/populations are sedentary or have established tracks/movements	5		: !		: I		i	i			1
Adults/juveniles are seasonally dispersive	10	10	85		i	10	115	10	115	10	115
Adults/juveniles are continuous dispersive	15	-	: I	10	115	-	i		-		
			: !		i I		į	į			:

B. Life history ange susceptible to control	WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Gambusia	Refs	Guppy	Refs	Swordtails	Refs	Platys	Refs	Tilapia mariae	Refs
sub-group of stages 10	b. Life history stage susceptible to control				İ			i	İ		i	
Single stage	all stages	5	5	85	5	115	5	115	5	115	5	115
Continuously	sub-group of stages	7			į			i	i		į į	
Continuously	single stage	10			i			i	i		i	
Continuously								!	- !			
Satemally					!		_	!	!		!	
Sestriced	•	-			5	115	5	115	5	115	5	115
A Recovery rate		,	7	85	I I			 	ŀ		ŀ	
Multiple reproductive events over an extended time period 10 10 85 10 115 10 1	Restricted	10			<u> </u>			!				
Multiple reproductive events over an extended time period 10 10 85 10 115 10 1	1 P				<u> </u>			<u>i </u>	i		į	
Multiple reproductive events over a short time period 10					I			<u>i </u>	i		i	
Single reproductive event	Multiple reproductive events over an extended time period		10	0.5	10	115	10	115	10	115	10	115
Unknown			10	03	10	113	10	1113	10	113	10	113
Total for Section 3.1 32 30 30 30 30 30 30 30					<u> </u>			1	1		<u> </u>	
2. Control Measures		1	22		20		20	<u> </u>	20		20	
a Present control measures Control measures exist Control measures exist Control measures being developed 5	Total for Section 3.1		32		30		30		30		30	
a Present control measures Control measures exist Control measures exist Control measures being developed 5	3.2 Control Magsuras							!				
Control measures exist												
Control measures being developed		2	2	85	2	117	2	117	2	117	2	117
Control measures do not exist				03	i	117	-	111/		117	2	11/
Description Description					<u>I</u>			<u>. </u>			1	
Highly effective	Control incasures do not exist	73			<u>i</u> j			<u> </u>	i i		1	
Highly effective	h Effectiveness of current control measures							1				
Moderately effective		2						1	1		i	
Low effectiveness					10	117	10	117	10	117	10	117
Unknown		10	10	85			-	i	i		i	· · · · · · · · · · · · · · · · · · ·
Low 2 85 85 10 117 117 10 117 10 117 10 117 10 117 10 117 10 117 10 117 10 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 <td></td> <td>5</td> <td></td> <td></td> <td>!</td> <td></td> <td></td> <td>!</td> <td></td> <td></td> <td>!</td> <td></td>		5			!			!			!	
Low 2 85 85 10 117 117 10 117 10 117 10 117 10 117 10 117 10 117 10 117 10 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 117 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Ì</td> <td></td>											Ì	
Moderate 5 5 85	c. Logistic difficulty of implementation				l			I.	ļ		ļ	
High					Į.			1	!		!	
d. Potential to develop resistance to control measures 1 3 3 85 3			5	85	ļ			!	!		!	
d. Potential to develop resistance to control measures 1	High	10			10	117	10	117	10	117		
Low 1	1 Detection to the second to t				<u> </u>						i	
Moderate 3 3 85		1			<u>:</u>			<u>: </u>	:		i	
High 5 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 4		2	2	95	<u>;</u>			<u>:</u>	1			
Unknown 3 3 3 3 3 3 3 3 3 3 3 4 </td <td></td> <td></td> <td>3</td> <td>0.3</td> <td>i</td> <td></td> <td></td> <td>i</td> <td>i</td> <td></td> <td>1</td> <td></td>			3	0.3	i			i	i		1	
e. Cost Low 1	<u>v</u>				3 1		3	<u> </u>	3 1		3 1	
Low 1	Olikilowii	3					,	1	ا ر		, , ,	
Low 1	e. Cost		i		t			1	1		1	
Moderate 3 1 5 117 <td< td=""><td></td><td>1</td><td></td><td></td><td><u>.</u> I</td><td></td><td></td><td>!</td><td>1</td><td></td><td>1</td><td></td></td<>		1			<u>.</u> I			!	1		1	
High 5 5 117 5 117 5 117 5 117 5 117 Unknown 3 3 3 3 3 4		3						İ	ı		ı	
Unknown 3 3					5	117	5	117	5	117	5	117
	Unknown	3	3		i.			1	į.		į	
									!			

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Gambusia	Refs	Guppy	Refs	Swordtails	Refs	Platys	Refs	Tilapia mariae	Refs
f. Level of control effort required			l I				1 1	I I			
One application of one control measure is successful	1		! !				1 1	I I			
Multiple application of single control measure	5		I I				1	I I			
One application of multiple control measures required	10		I I				1	I		ı	
Multiple applications of multiple control measures required	15	15	85	15	117	15	117	15	117	15	117
Total for Section 3.1	55	32	I I	30		30	1	30		30	
Total for Section 3.2	45	38	! !	45		45	<u> </u>	45		45	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	70	! !	75		75	! ! !	75		75	
4. Negative Impact of control/potential measures			i ! !				<u> </u>				
4.1 Habitat impacts			 				<u> </u>	I			
Minimal physical alteration to habitat	5		i i				1	ı I			
Moderate physical alterations to habitat	10	10	85	10	117	10	117	10	117	10	117
Major physical alterations to habitat	25		I I		l		i	ļ I		1 :	
Unknown	12		i				i	1		:	
			i i				i	i		1	
4.2 Native Population Impacts			i i				i	i			
Control measures affect few individuals of some species	5		i				i	i			
Control measures impact moderate numbers of individuals of several species	10	10	85				i	i			
Control measures impact large numbers of individuals of most species	25		i	25	117	25	117	25	117	25	117
Unknown	12		I I I				1 1	I I			
4.3 Other pest species			 		<u> </u>		1 1				
Control measures release other pest species with minor enhancement of impacts	5		I I				i i	ı I			
Control measures release other pest species with moderate enhancement of impacts	10		I I				1	1			
Control measures release other pest species with major enhancement of impacts	25		I I				i i	I I			
Unknown	12	12	 	12		12	1 1	12		12	
4.4 Length of Impact			I I I		<u> </u>		 				
Short term (up to several weeks)	5		I				1	l l			
Medium term (one season or reproductive cycle)	10		l I	10	117	10	117	10	117	10	117
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25	25	85				!				
Unknown	15		! 				! !				
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		57		57		57	<u> </u>	57		57	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Oreochromis mossambic	Refs	Cane toad	Ref	House Gecko	ref	Rock Dove		Turtle Dove	ref	Nutmeg Manikin
1. Level of Current impact					! !							
1.1 Distribution					<u> </u> 							
a. Distribution and abundance relative to Wet Tropics Bioregion					l I		<u> </u>					
Established populations abut the Wet Tropics Bioregion	2				<u> </u> 				l I			-
					l I							
Established populations exist	10	10	112	10	70,4,79	10	92	10	81	10	2	10
b. Wet Tropics Bioregion Provinces in which species is present.					<u> </u> 							
Kirrama-Hinchinbrook	4				I I					4		
Paluma-Seaview	4				!					4		
Macalister	4				!	4	92	4		4		4
Bellenden Ker	4				i	4	92	4		4		4
Atherton	4	4	112		!	4	92	4		4		4
Herbert	4				!	4	92	4		4		4
Tully	4				!	4	92	4		4		4
Innisfail	4	4	112		!	4	92	4		4		4
Daintree-Bloomfield	4				!							
Total		8		0	!	24		24	81	32	2,3	24
Present in all	40			40	79						_,-	
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))					 							
Kirrama-Hinchinbrook (1x2)+(5x1)	7				į							
Paluma-Seaview (1x2)+(7x1)	9				į							
Macalister $(4x2)+(1x1)$	9											
Bellenden Ker $(4x2)+(2x1)$	10				į							
Atherton $(5x2)+(3x1)$	13											
Herbert $(8x2)+(5x1)$	21				į							
Tully (11x2)+(5x1)	27				į							
Innisfail (11x2)+(7x1)	29	29	112,118			29	92	29	81	29	2,3	29
Daintree-Bloomfield (12x2)+(6x1)	30			30	79							
d. Distribution and Abundance					! ! !							
Small populations, patchy distribution	5				. I	5	92,93	5	81	1 :		5
Small populations, continuous distribution	10			10	77		, - ,,, 0			10	2,3,95	
Large populations, patchy distribution	10	10	91,112		!							
Large populations, continuous distribution	20		, , , , , , , , , , , , , , , , , , ,		 							
					i i							
Total for Section 1.1	100	57		90	l	68		68		81		68

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Oreochromis mossambic	Refs	Cane toad	Ref	House Gecko	ref	Rock Dove		Turtle Dove	ref	Nutmeg Manikin
			l				!					
1.2 Direct effects on native species distributions and abundances			! !				l I			ŀ		
Species has exhibited no detectable effect	1		! ! !				! ! !	1	95			
Minor modification to native species distributions and abundances	10		!				i I					10
Moderate modification to native species distributions and abundances	20		! !				! I			20	95	
Major modification to native species distributions and abundances	30]]	30	77,79		! !					
Responsible for extinction of native species	50]]				! !					
Impact Unknown	25	25	! !			25	! !					
			! !				! ! !					
1.3 Ecological interaction with vulnerable or endangered species			<u> </u> 			1		1	0.5	1	05.01	
Species has no or little interaction with vulnerable or endangered species	1		! !			1	93	1	95	1	95,81	
Species has minor interaction with vulnerable or endangered species	20		! !				I					
Species has moderate interaction with vulnerable or endangered species	30		! !	30	77,79		! !					
Species has major interaction with vulnerable or endangered species	50		l I				! !					
Ecological interaction unknown	25	25	I]]					25
Total for Section 1.1	100	57		90		68	i I	68		81		68
Total for Section 1.1	100	50	1	60		26	! !	2		21		35
Total for Section 1.2 - 1.5	100		<u>.</u>	00		20	<u> </u>	2		21		35
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	107	: I	150		94	<u>. </u>	70		102		103
2. Pest potential			<u>.</u> !									
•			I I				i i					
2.1 Known level of impact in other natural areas			! !				! !					
Not known to cause impacts in any other natural areas	1		i				! !					
Known to cause impacts in natural areas, but in other habitats and different climates	2		i I				l I	2	95	5	95	
Known to cause low impact in natural areas in similar habitats and climate zones	5		!			5	35					5
Known to cause moderate impact in natural areas in similar habitats and climates	10	10	54,115				! !					
Known to cause high impact in natural areas in similar habitats and climate zones.	15		: ! !	15	94,20		: ! !					
			<u>!</u> !	†			!			1		
2.2 Reproductive Potential			! !				!					
a. Reproductive cycles			i I				İ					
Reproduction reliant on specific a-seasonal environmental stimuli	1						İ			i		
Seasonal	2		l I				i L					
Multiple reproductive events/season	4		i I	4	92,93		İ					
Continuous breeding	5	5	6				i L	5	95	5	95	5
Able to reproduce from one individual	5		Î			5	93					
Unknown	3		!									
			! !	1			<u> </u>					
b. Reproductive output	1		! !	1		1	0.2				0.5	
Low (<3 offspring/cycle)	1		! !			1	93		0.5	1	95	2
Moderate (3 – 10 offspring/cycle)	3	_	11.5	-	0.2		! !	3	95			3
High (>10/cycle)	5	5	115	5	93		! !					-
Unknown	3		! !	1			! !					
			! !				!	1		1 !		<u> </u>

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Oreochromis mossambic	Refs	Cane toad	Ref	House Gecko	ref	Rock Dove		Turtle Dove	ref	Nutmeg Manikin
c. Offspring viability			I I		1		!					
Low	1				!		!					
Moderate	3		!	5	93		!					3
High	5	5	6,115		!		! !					
Unknown	3				i i	3	!	3		3		
Total for Section 2.2	15	15	! ! !		! !	9	! ! !	11		9		11
			I		<u>i</u>		<u> </u>					
2.3 Dispersal ability			i T		1		! !					
Low potential for dispersal	5		1		İ		i					
Moderate potential for dispersal	10		i		į		i	i		i		
Dispersal associated with human movement	15		i		i	15	35,93	15	95	15	95	15
High potential for dispersal	20	20	112,115	20	20,92,93		i			i	i	
Unknown potential	10		 		: !		 					
Total for Sections 2.1 – 2.3	50	45	: !	47	: !	29	i I	28		29		31
2.4 Mode of Impact			I I		1	1	! !					
Degradation/deprivation of habitat	5		<u>. </u>		<u> </u>	1	<u>1</u>			+ :	<u> </u>	
Competition for food and reproductive resources	5		! !		<u> </u>	5	93			5	95	5
Transmission of disease/parasites/other pest species	10		! !		<u> </u>	3	, <i>13</i>	10	81		/3	, ,
Direct predation of native animals	15	15	6	15	80		<u> </u> 	10	01		l.	
More than one of the above modes	20	13	. 0	13	00		<u>. </u>					
Note than one of the above modes	20		i !		i !		!					
2.5 Potential interactions with vulnerable or endangered species					i i		i i					
Species has little overlap with vulnerable or endangered species	2		I 1		1	2	92,93	2	95	2	95	
Species has minor overlap with vulnerable or endangered species	10		I 1		1		!				1	
Species has moderate overlap with vulnerable or endangered species	20		!	20	20,93		1	!		!		20
Species has major overlap with vulnerable or endangered species	30		!		1		i					
Ecological overlap unknown	15	15	!		İ							
Total for 2.4		15	i !	15	!	5	! !	10		5		5
Total for Sections 2.1 – 2.3	50		<u>i</u> i	47	<u>i</u> :	29	<u>.</u>	28		29		31
Total for Sections 2.4 – 2.5	50	20		35	.	7	; i	12		7		25
			I		!		 					
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	75	! !	82	:	36	! !	40		36		56
3. Feasibility of Control			i		i		<u>!</u>					
			i		<u>.</u>							
3.1General susceptibility to control			i I		i		: !					
a. Dispersal/mobility			: !		i		i					
Individuals/populations are sedentary or have established tracks/movements	5		i		i		i	5	95			
Adults/juveniles are seasonally dispersive	10	10	115	10	92,93		:			10	81,95	10
Adults/juveniles are continuous dispersive	15	10	: I	1,0	·	15	93			1 1		1.0
and the state of t	- 15		:	<u> </u>	:	1		t :		 		

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Oreochromis mossambic	Refs	Cane toad	Ref	House Gecko	ref	Rock Dove		Turtle Dove	ref	Nutmeg Manikin
b. Life history stage susceptible to control			1								!	
all stages	5	5	115	5	93	5	93	5	95	5	81	5
sub-group of stages	7		i								i i	
single stage	10		1								!	İ
			i								i	
c. Temporal avialability			į !			,				'	i I	İ
Continuously	5	5	115			5	93	5	95	5	81,95	5
Seasonally	7		i I	7	92,93						I I	
Restricted	10		1 1]]	İ
			1] 	
d. Recovery rate			i i								I I	
Multiple reproductive events over an extended time period	5		i i								I I	
Multiple reproductive events over a short time period	10	10	115	10	92,93	10	93	10	95		I I	
Single reproductive event	15		! !								l I	
Unknown	7		I I							7] 	7
Total for Section 3.1		30	i I	32		35		25		27	ı I	27
			i								i	
3.2. Control Measures			i								i	
a. Present control measures			i								i I	
Control measures exist	2	2	117			2	128	2	108,109	2	108,109	2
Control measures being developed	5		1	5	78		l				 I	
Control measures do not exist	45		i i								l I	
			1	† †			l				! 	
b. Effectiveness of current control measures			i i								i I	
Highly effective	2		i								I	
Moderately effective	5	10	117					5	108,109		i i	
Low effectiveness	10		!			10	128				I	
Unknown	5		:	10	78					5	108,109	5
			!								I	
c. Logistic difficulty of implementation			!								! !	
Low	2		!								l i	
Moderate	5		!			5	128	5			l i	
High	10	10	117	10	78					10	I	10
			!								l I	
d. Potential to develop resistance to control measures			1				l I				I	<u> </u>
Low	1		1								l	
Moderate	3		1								l	
High	5		1								! :	
Unknown	3	3	l	3		3		3		3	l L	3
			l i								l	
e. Cost			!	:							! :	
Low	1		!								i i	
Moderate	3		l	ļ							l 	<u> </u>
High	5		117	:							! :	
Unknown	3		!	3		3	1	3		3	l 	3
			1								!	1

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Oreochromis mossambic	Refs	Cane toad	Ref	House Gecko	ref	Rock Dove		Turtle Dove	ref	Nutmeg Manikin
f. Level of control effort required		mossamble	i I	toau		GCCRO	i I	Dove	i I	Dove	i I	Wignikin
One application of one control measure is successful	1] 	i i			1]] 	
Multiple application of single control measure	5		I I					5	108,109	5	108,109	
One application of multiple control measures required	10		<u> </u> 						1		1	10
Multiple applications of multiple control measures required	15	15	117	15	78,79	15	129		I I		!	10
Transple applications of manapie control measures reclaimed	10		117	10	70,77	- 10			I I		1	
Total for Section 3.1	55	30	! !	32		35		25	! !	27	1	27
Total for Section 3.2	45	45	I I	46		38	i I	23	I I	28	i	33
			i	į			İ		i		į	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	75	I I	78		73	I I	48	I I	55	I I	60
4. Negative Impact of control/potential measures				i			i				i !	
			l I	l			i i		l I		1	
4.1 Habitat impacts			! !	i			<u> </u>		! !		1	
Minimal physical alteration to habitat	5		! !	İ		5	128		! !	5	108,109	
Moderate physical alterations to habitat	10	10	117	10	78		1	10	108		1	10
Major physical alterations to habitat	25		! !						! !		1	
Unknown	12		İ	i			i		İ		į	
			i 	į			<u> </u>		i 		<u>i</u>	<u> </u>
4.2 Native Population Impacts			! !	Į į			!		! !		1	<u> </u>
Control measures affect few individuals of some species	5		!	!		5	128		!	5	108,109	5
Control measures impact moderate numbers of individuals of several species	10		 				! !		 		1	
Control measures impact large numbers of individuals of most species	25	25	117				i I		l I		1	
Unknown	12		l I	12			i I	12	l I		1	
			! ! !	i			<u> </u>		! ! !		<u> </u>	
4.3 Other pest species] 	1 -		_	100] 		1	
Control measures release other pest species with minor enhancement of impacts	5] 	5	77	5	128] 		1	_
Control measures release other pest species with moderate enhancement of impacts	10		I I	1			<u> </u>	-	I I		1	
Control measures release other pest species with major enhancement of impacts	25	10	I I	1			1	10	I I	10	l I	12
Unknown	12	12	l !	!			!	12	l !	12	1	12
4.4 Length of Impact			1 				<u>.</u> !		1 		1 1 1	
Short term (up to several weeks)	5		l I	i i		5	129		l I	5	108,109	5
Medium term (one season or reproductive cycle)	10	10	117				i	10	108		1	
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25		1 1	l !			! !		1 1		1	
Unknown	15		! 	15		1	!	1	! 		1	
			I I	<u> </u>			i i	1	I I		i i	
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		57	I	42		20	1	44	I	27	1	32

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Ref
1. Level of Current impact		
1.1 Distribution		
a. Distribution and abundance relative to Wet Tropics Bioregion		
Established populations abut the Wet Tropics Bioregion	2	
Established populations exist	10	81
b. Wet Tropics Bioregion Provinces in which species is present.		
Kirrama-Hinchinbrook	4	
Paluma-Seaview	4	
Macalister	4	
Bellenden Ker	4	
Atherton	4	
Herbert	4	
Tully	4	
Innisfail	4	
Daintree-Bloomfield	4	
Total		2,4
Present in all	40	
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))		
Kirrama-Hinchinbrook (1x2)+(5x1)	7	
Paluma-Seaview (1x2)+(7x1)	9	
Macalister $(4x2)+(1x1)$	9	
Bellenden Ker $(4x2)+(2x1)$	10	
Atherton $(5x2)+(3x1)$	13	
Herbert (8x2)+(5x1)	21	
Tully (11x2)+(5x1)	27	
Innisfail (11x2)+(7x1)	29	20,24,2
Daintree-Bloomfield (12x2)+(6x1)	30	
d. Distribution and Abundance		
Small populations, patchy distribution	5	81.41.2
Small populations, continuous distribution	10	01,71,2
Large populations, patchy distribution	10	
Large populations, continuous distribution	20	
Total for Section 1.1	100	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Ref
1.2 Direct effects on native species distributions and abundances		
Species has exhibited no detectable effect	1	
Minor modification to native species distributions and abundances	10	81
Moderate modification to native species distributions and abundances	20	
Major modification to native species distributions and abundances	30	
Responsible for extinction of native species	50	
Impact Unknown	25	
1.3 Ecological interaction with vulnerable or endangered species		
Species has no or little interaction with vulnerable or endangered species	1	
Species has minor interaction with vulnerable or endangered species	20	
Species has moderate interaction with vulnerable or endangered species	30	
Species has major interaction with vulnerable or endangered species	50	
Ecological interaction unknown	25	
Total for Section 1.1	100	
Total for Section 1.2 - 1.3	100	
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	
2. Pest potential		
2.1 Known level of impact in other natural areas		
	1	
2.1 Known level of impact in other natural areas	1 2	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas		81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates	2	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones	2 5	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones.	2 5 10	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential	2 5 10	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive cycles	2 5 10 15	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli	2 5 10 15	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal	2 5 10 15	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season	2 5 10 15	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding	2 5 10 15 1 1 2 4 5	81
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual	2 5 10 15 1 1 2 4 5 5	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding	2 5 10 15 1 1 2 4 5	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual	2 5 10 15 1 1 2 4 5 5	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown	2 5 10 15 1 1 2 4 5 5	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive cycles Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output	2 5 10 15 1 1 2 4 5 5 5 3	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output Low (<3 offspring/cycle)	2 5 10 15 1 1 2 4 5 5 3	81,95
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climates Known to cause high impact in natural areas in similar habitats and climate zones. 2.2 Reproductive Potential a. Reproductive evential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output Low (<3 offspring/cycle) Moderate (3 – 10 offspring/cycle)	2 5 10 15 1 1 2 4 5 5 3	81,95

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Ref
c. Offspring viability		
Low	1	İ
Moderate	3	81
High	5	01
Unknown	3	i e
Total for Section 2.2	15	
1 otal for Section 2.2	15	
2.3 Dispersal ability		
Low potential for dispersal	5	i e
Moderate potential for dispersal	10	i e
Dispersal associated with human movement	15	81
High potential for dispersal	20	01
Unknown potential	10	ŀ
Chikhowh potential	10	i
Total for Sections 2.1 – 2.3	50	
2.4 Mode of Impact		
Degradation/deprivation of habitat	5	
Competition for food and reproductive resources	5	81
Transmission of disease/parasites/other pest species	10	1
Direct predation of native animals	15	
More than one of the above modes	20	
2.5 Potential interactions with vulnerable or endangered species		
Species has little overlap with vulnerable or endangered species	2	<u> </u>
Species has minor overlap with vulnerable or endangered species Species has minor overlap with vulnerable or endangered species	10	i e
Species has moderate overlap with vulnerable or endangered species Species has moderate overlap with vulnerable or endangered species	20	81, 88
Species has major overlap with vulnerable or endangered species Species has major overlap with vulnerable or endangered species	30	01, 00
	15	<u> </u>
Ecological overlap unknown	15	
Total for 2.4		
Total for Sections 2.1 – 2.3	50	
Total for Sections 2.4 – 2.5	50	i e
10tal 101 Sections 2.4 – 2.5	30	ļ —
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	
3. Feasibility of Control		
270		
3.1General susceptibility to control		
a. Dispersal/mobility		
Individuals/populations are sedentary or have established tracks/movements	5	
Adults/juveniles are seasonally dispersive	10	81
Adults/juveniles are continuous dispersive	15	
		i

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Ref
b. Life history stage susceptible to control		
all stages	5	81
sub-group of stages	7	
single stage	10	
c. Temporal avialability		
Continuously	5	.5
Seasonally	7	
Restricted	10	
Rootheted	10	
d. Recovery rate		
Multiple reproductive events over an extended time period	5	
Multiple reproductive events over a short time period	10	
Single reproductive event	15	
Unknown	7	
Total for Section 3.1		
3.2. Control Measures		
a. Present control measures		
Control measures exist	2	108,109
Control measures being developed	5	
Control measures do not exist	45	
b. Effectiveness of current control measures		
Highly effective	2	
Moderately effective	5	
Low effectiveness	10	
Unknown	5	109
T : (1:0° 1, 0° 1, 0°		
c. Logistic difficulty of implementation Low	2	
Moderate Low	5	
High	10	
rigi	10	
d. Potential to develop resistance to control measures		
Low	1	
Moderate	3	
High	5	
Unknown	3	
e. Cost		
Low	1	
Moderate	3	
High	5	
Unknown	3	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Ref
f. Level of control effort required		
One application of one control measure is successful	1	
Multiple application of single control measure	5	
One application of multiple control measures required	10	109
Multiple applications of multiple control measures required	15	
Total for Section 3.1	55	
Total for Section 3.2	45	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	
4. Negative Impact of control/potential measures		
4.1 Habitat impacts		
Minimal physical alteration to habitat	5	
Moderate physical alterations to habitat	10	109
Major physical alterations to habitat	25	
Unknown	12	
4.2 Native Population Impacts		
Control measures affect few individuals of some species	5	109
Control measures impact moderate numbers of individuals of several species	10	
Control measures impact large numbers of individuals of most species	25	
Unknown	12	
4.3 Other pest species		
Control measures release other pest species with minor enhancement of impacts	5	
Control measures release other pest species with moderate enhancement of impacts	10	
Control measures release other pest species with major enhancement of impacts	25	
Unknown	12	
4.4 Length of Impact		
Short term (up to several weeks)	5	109
Medium term (one season or reproductive cycle)	10	
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25	
Unknown	15	
TOTAL FOR SECTION A NEGATIVE IMPACT OF CONTROL MEASURES		
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		i

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Sparrow	ref	Indian Myna	ref	Bulbul	ref	Brown Rat	ref	Black Rat	ref	Dog
1. Level of Current impact					I I		! !					
1.1 Distribution					l I		I I			I I		_
a. Distribution and abundance relative to Wet Tropics Bioregion					<u> </u> 		1			1		+-
Established populations abut the Wet Tropics Bioregion	2	<u> </u>	<u> </u>		<u> </u> 	2	88		<u> </u> 	I		+-
Established populations exist	10	10	2	10	2,81,95] 	10	92,2	10	92,2	10
b. Wet Tropics Bioregion Provinces in which species is present.							1 1		<u> </u>	i		+-
Kirrama-Hinchinbrook	4	4		4	I I		1 1			4		
Paluma-Seaview	4	4		4	I I		I I			!		
Macalister	4	4		4	I I		1 1			4		
Bellenden Ker	4	4		4	I I		1 1	4		4		
Atherton	4	4		4	I I		I I			4		
Herbert	4	4		4	i I		I I			4		
Tully	4	4		4	i i		! !	4		4		
Innisfail	4	4		4	i i		i i	4		4		
Daintree-Bloomfield	4				i I		I I			4		
Total		32	2,3	32	2,3	0	I I	12	2,3	32	2,3	0
Present in all	40				 		! !			ļ		40
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))					 		 					
Kirrama-Hinchinbrook (1x2)+(5x1)	7				į		į			į		
Paluma-Seaview (1x2)+(7x1)	9				l		!			i		
Macalister $(4x2)+(1x1)$	9	ı			i 		I			i		
Bellenden Ker (4x2)+(2x1)	10	i			i		į			į		
Atherton $(5x2)+(3x1)$	13				į					i		
Herbert (8x2)+(5x1)	21				<u> </u>		i			į		
Tully (11x2)+(5x1)	27				İ		!			i		
Innisfail (11x2)+(7x1)	29	29	2,3	29	2,3		i	29	2,3,92	į		
Daintree-Bloomfield (12x2)+(6x1)	30				i :		i			30	2,3	30
d. Distribution and Abundance					i		:					+
Small populations, patchy distribution	5	i			i		i	5	2,3	5	2,3	T
Small populations, continuous distribution	10				: ! !		: ! !			i		10
Large populations, patchy distribution	10	10	95	10	95,81		I I			į		
Large populations, continuous distribution	20						1 1			į		1
Total for Section 1.1	100	81		81	! !	2	! !	56		77		90

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Sparrow	ref	Indian Myna	ref	Bulbul	ref	Brown Rat	ref	Black Rat	ref	Dog
12 Pinet Control of the Control of t					l		l		I		l	1
1.2 Direct effects on native species distributions and abundances					! ! !		! ! !				0.4	
Species has exhibited no detectable effect	1				I I	1	 		 	1	94	
Minor modification to native species distributions and abundances	10	10	81		l I		l I		l I		l I	
Moderate modification to native species distributions and abundances	20				l I		I I		l I		I I	20
Major modification to native species distributions and abundances	30				! !		l I		l I		l İ	
Responsible for extinction of native species	50				l I		I I		l I		I I	
Impact Unknown	25			25	I I I		I I I	25	! ! !		I I I	
1.3 Ecological interaction with vulnerable or endangered species					<u> </u> 		<u> </u> 		<u> </u> 		<u> </u> 	+
Species has no or little interaction with vulnerable or endangered species	1				i I	1	I		!		I	$\overline{}$
Species has minor interaction with vulnerable or endangered species	20				l I		l I		<u> </u>	-	l I	+
Species has moderate interaction with vulnerable or endangered species Species has moderate interaction with vulnerable or endangered species	30				<u> </u> 	-	<u> </u> 		<u> </u> 	-	<u> </u> 	+-
Species has major interaction with vulnerable or endangered species Species has major interaction with vulnerable or endangered species	50			1	<u> </u> 	-	<u> </u> 	+	<u> </u> 	+	<u> </u> 	50
Ecological interaction unknown	25	25		25	<u> </u> 		<u> </u> 	25	<u> </u> 	25	<u> </u> 	30
Ecological interaction unknown	23	23		23	<u> </u>] 	23	<u> </u> !	23] 	+
Total for Section 1.1	100	81		81	! !	2	! !	56	! !	77	! !	90
Total for Section 1.2 - 1.3	100	35		50	I I	2	i	50	I I	26	i	70
					l		İ		!		l	
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	116		131	I I	4	l L	106	I I	103	l L	160
2. Pest potential					<u>i</u>		<u>i</u>		<u>i</u> !		<u>i</u>	
2.1 CSt potential					!		I		! !			-
2.1 Known level of impact in other natural areas					! 		i I		1 1		i I	$\overline{}$
Not known to cause impacts in any other natural areas	1	1	95		! !		i I		! !		I I	_
Known to cause impacts in natural areas, but in other habitats and different climates	2			5	81,95		l I	5	94	2	94	
Known to cause low impact in natural areas in similar habitats and climate zones	5				i		i		i		i	+-
Known to cause moderate impact in natural areas in similar habitats and climates	10				<u>:</u> I	10	81		<u>.</u> i		<u>!</u> 	10
Known to cause high impact in natural areas in similar habitats and climate zones.	15				i I		i I		! ! !		i I	
					i I		i i		! !		i I	+
2.2 Reproductive Potential					l		 -				l	
a. Reproductive cycles					!	,	i I		!		i I	
Reproduction reliant on specific a-seasonal environmental stimuli	1	i			l		i !		!		i L	
Seasonal	2				l 	2	41		i 		l L	2
Multiple reproductive events/season	4	4	95	4	95,81	·	l	4	94	4	94	
Continuous breeding	5				l !		l !		! !		l !	
Able to reproduce from one individual	5						!		!		! !	
Unknown	3				l		l		! !		l	
b. Reproductive output					! !	 	! !	1	<u> </u>		! !	+
Low (<3 offspring/cycle)	1				i		i		 		i	+-
Moderate (3 – 10 offspring/cycle)	3	3	95	3	95,81	3	41	 	! i	3	94	3
High (>10 onspring cycle)	5		- /		75,01		- '1	5	94			+
Unknown	3				! !	t	<u> </u> 	1	' ''		ļ	+-
				1	i							

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Sparrow	ref	Indian Myna	ref	Bulbul	ref	Brown Rat	ref	Black Rat	ref	Dog
c. Offspring viability										I I		Т
Low	1									i		
Moderate	3									i		
High	5									i		
Unknown	3	3	95	3		3	41	3		3		3
Total for Section 2.2	15	10		10		8		12		10		8
2.3 Dispersal ability							l 			1		+
Low potential for dispersal	5									i		
Moderate potential for dispersal	10									i		10
Dispersal associated with human movement	15	15	95	15	95			15	94	15	94	
High potential for dispersal	20					i i				i		1
Unknown potential	10					10	l			i		
Total for Sections 2.1 – 2.3	50	26		30		28		32		27		28
2.4 Mode of Impact							 					
Degradation/deprivation of habitat	5					+	<u> </u>			1		+
Competition for food and reproductive resources	5	5	95	5	95	5	81			5	94	+
Transmission of disease/parasites/other pest species	10		,,,	10	95	5	81			1		+
Direct predation of native animals	15			10	,,,		01	15	94	15	94	+
More than one of the above modes	20							15	,, <u> </u>	13	<i>,</i> ,	20
2.5 Potential interactions with vulnerable or endangered species										<u> </u>		+
Species has little overlap with vulnerable or endangered species	2	2	95							i		
Species has minor overlap with vulnerable or endangered species	10							10	94	!		
Species has moderate overlap with vulnerable or endangered species	20									į		20
Species has major overlap with vulnerable or endangered species	30									!		
Ecological overlap unknown	15			15		15				15		
Total for 2.4		5		15		10		15		20		20
Total for Sections 2.1 – 2.3	50	26		30		28		32		27		28
Total for Sections 2.4 – 2.5	50	7		30		25		25		35		40
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	33		60		53		57		62		68
3. Feasibility of Control												
3.1General susceptibility to control										1 :		1
a. Dispersal/mobility	_									!		+
Individuals/populations are sedentary or have established tracks/movements	5							<u> </u>		!		\bot
Adults/juveniles are seasonally dispersive Adults/juveniles are continuous dispersive	10 15	10	81	10	81,95	10	81	10	94	10	94	\bot
												15

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Sparrow	ref	Indian Myna	ref	Bulbul	ref	Brown Rat	ref	Black Rat	ref	Dog
b. Life history stage susceptible to control			!		İ		!		İ			
all stages	5	5	108,109	5	81	5	81	5	94	5	94	5
sub-group of stages	7		i				i					
single stage	10		i I		: !		: 		! !			
			!		!		!		!			
c. Temporal avialability	-	-	100 100	-	01.05	-	01	-	0.4	-	0.4	
Continuously	5	5	108,109	5	81,95	5	81	5	94	5	94	5
Seasonally	7		! !		<u> </u>		! !		<u>.</u>			
Restricted	10		! ! !		: <u>!</u> !		! ! !		: <u>I</u>			
d. Recovery rate			<u>!</u>		<u>!</u>		! !		<u>!</u>		<u> </u>	+
Multiple reproductive events over an extended time period	5		! !		!		! !		!			5
Multiple reproductive events over a short time period	10	10	95	10	81,95		!	10	94	10	94	
Single reproductive event	15				i I		! !	-	! !		-	1
Unknown	7		!		i	7	!		!			
Total for Section 3.1		30	! !	30	i I	27	: !	30	i I	30		30
			į		į		i		į			
3.2. Control Measures			î 		1 !		1 !		1			
a. Present control measures			!		į		! !		<u> </u>			
Control measures exist	2	2	108,109	2	108,109	2	108,109	2	108,109	2	108,109	2
Control measures being developed	5		!		I .		!		I I			
Control measures do not exist	45		!		i i		!		i i			
I FOC di Company			l 		! !		l 		!			
b. Effectiveness of current control measures			<u>.</u>		<u>. </u>				<u>. </u>			₩
Highly effective Moderately effective	5		: 1		<u> </u>		<u>:</u> 	5	108,109	5	108,109	5
Low effectiveness	10	10	108,109		<u>i</u> I		<u> </u>	3	100,109	3	100,109	
Unknown	5	10	100,109		i.	5	<u>. </u>		<u>.</u>			+
UIRIIOWII			i <u> </u>	3	<u>i</u> I		i <u> </u>		<u>i</u> I			+
c. Logistic difficulty of implementation			! !		!		! !		!			†
Low	2				!				:			1
Moderate	5		! !	5	108,109	5	108	5	108,109	5	108,109	5
High	10	10	108,109		i i		l		l i			
			! !		I I		! !		!			_
d. Potential to develop resistance to control measures	1		! !		<u> </u>		! ! !		! : !	-		
Low Moderate	3				i I		; I		<u>;</u>			+
High	5		<u>:</u> I		<u>i </u>		<u>: </u>		<u>:</u> !			+
Unknown	3	3	<u>: </u>		I I		<u>: </u>	3	i I	3	<u> </u>	3
CHARLETT		,	ı I		ı I	,	ı I	, ,	ı I	,		
e. Cost			! !		!		! !		! !			
Low	1		I		!		 		!			
Moderate	3				!		l I		1			
High	5		!		I		!		!			5
Unknown	3	3	!	3	i ,	3	! !	3	!	3		
			i		1		i		1			

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Sparrow	ref	Indian Myna	ref	Bulbul	ref	Brown Rat	ref	Black Rat	ref	Dog
f. Level of control effort required] 		i i]] 			
One application of one control measure is successful	1] 		1]] [Ī
Multiple application of single control measure	5] 		1	5	108	5	108,109	5	108,109	Ī
One application of multiple control measures required	10		I I	10	108,109		I I] 			
Multiple applications of multiple control measures required	15	15	108,109		i I		 		I I			15
Total for Section 3.1	55	30	 	30	1 1 1	27	 	30	I I I	30		30
Total for Section 3.2	45	43	I I	28	1 1	23	I I	23	! !	23		35
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	73	! ! !	58	! ! !	50	! :	53	! ! !	53		65
4. Negative Impact of control/potential measures			i ! !		i I I				i ! !			
4.1 Habitat impacts			I I I		 		<u> </u> 		 			+-
Minimal physical alteration to habitat	5		I I		I I		I I		1 1			
Moderate physical alterations to habitat	10	10	108,109	10	108,109	10	108	10	108	10	108	10
Major physical alterations to habitat	25		ı — ´ I		i i		I I		1 1			1
Unknown	12		l :		! ! :		l :		! !			
4.2 Native Population Impacts			! :		! :		! : !		! : !			+
Control measures affect few individuals of some species	5	5	108,109		i		i		i			1
Control measures impact moderate numbers of individuals of several species	10		: 	10	13,14,108, 109		: 		: 			10
Control measures impact large numbers of individuals of most species	25		I I		:] 		i i	· ·		
Unknown	12		I I		1 1	12	I I I	12	1 	12		
4.3 Other pest species			l I I		<u> </u> 		l I I		I I I			+
Control measures release other pest species with minor enhancement of impacts	5	5	95		1		I I		! !			
Control measures release other pest species with moderate enhancement of impacts	10		l I		1		l I		l I			10
Control measures release other pest species with major enhancement of impacts	25		i i				i i		i			
Unknown	12		1 	12	1 1	12	 	12	1 	12		1
4.4 Length of Impact			I I I		1 1 1		I I I		1 1 1			
Short term (up to several weeks)	5	5	108,109	5	108,109	5	108,109		! !			
Medium term (one season or reproductive cycle)	10		! !		i I		! !	10	108	10	108	10
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25		1 		! !		1 		1 			
Unknown	15		I I I		1 1 1		I I I		I I I			
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		25	I I I	37	! !	39	I I I	44	I I	44		40

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
1. Level of Current impact		
1.1 Distribution		
a. Distribution and abundance relative to Wet Tropics Bioregion		
Established populations abut the Wet Tropics Bioregion	2	
Established populations exist	10	2
b. Wet Tropics Bioregion Provinces in which species is present.		
Kirrama-Hinchinbrook	4	
Paluma-Seaview	4	
Macalister	4	
Bellenden Ker	4	
Atherton	4	
Herbert	4	
Tully	4	
Innisfail	4	
Daintree-Bloomfield	4	
Total		
Present in all	40	2
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))		
Kirrama-Hinchinbrook (1x2)+(5x1)	7	
Paluma-Seaview (1x2)+(7x1)	9	
Macalister $(4x2)+(1x1)$	9	
Bellenden Ker $(4x2)+(2x1)$	10	
Atherton $(5x2)+(3x1)$	13	
Herbert (8x2)+(5x1)	21	
Tully (11x2)+(5x1)	27	
Innisfail (11x2)+(7x1)	29	
Daintree-Bloomfield (12x2)+(6x1)	30	2
d. Distribution and Abundance		
Small populations, patchy distribution	5	
Small populations, continuous distribution	10	2
Large populations, patchy distribution	10	
Large populations, continuous distribution	20	
	100	
Total for Section 1.1	100	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
1.2 Direct effects on native species distributions and abundances		
Species has exhibited no detectable effect	1	
Minor modification to native species distributions and abundances	10	
Moderate modification to native species distributions and abundances	20	110
Major modification to native species distributions and abundances	30	
Responsible for extinction of native species	50	
Impact Unknown	25	
1.3 Ecological interaction with vulnerable or endangered species		
Species has no or little interaction with vulnerable or endangered species	1	
Species has minor interaction with vulnerable or endangered species	20	
Species has moderate interaction with vulnerable or endangered species	30	
Species has major interaction with vulnerable or endangered species	50	110
Ecological interaction unknown	25	
Total for Section 1.1	100	
Total for Section 1.1	100	
10tal for Section 1.2 - 1.5	100	
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	
2. Pest potential		
2.1 Known level of impact in other natural areas		
Not known to cause impacts in any other natural areas	1	
Known to cause impacts in natural areas, but in other habitats and different climates	2	
Known to cause low impact in natural areas in similar habitats and climate zones	5	
Known to cause moderate impact in natural areas in similar habitats and climates	10	94,40
Known to cause high impact in natural areas in similar habitats and climate zones.	15	
2.2 Reproductive Potential		
a. Reproductive cycles		
Reproduction reliant on specific a-seasonal environmental stimuli	1	
Seasonal	2	94
Multiple reproductive events/season	4	
Continuous breeding	5	
Able to reproduce from one individual	5	
Unknown	3	
b. Reproductive output		
Low (<3 offspring/cycle)	1	
Moderate (3 – 10 offspring/cycle)		91
Moderate (3 – 10 offspring/cycle) High (>10/cycle)	3	94
High (>10/cycle)	3 5	94
	3	94

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
c. Offspring viability		
Low	1	
Moderate	3	
High	5	
Unknown	3	
Total for Section 2.2	15	
	-10	
2.3 Dispersal ability		
Low potential for dispersal	5	
Moderate potential for dispersal	10	40
Dispersal associated with human movement	15	70
High potential for dispersal	20	
Unknown potential	10	
Chikhowh potential	10	
Total for Sections 2.1 – 2.3	50	
2.4 Mode of Impact		
Degradation/deprivation of habitat	5	
Competition for food and reproductive resources	5	
Transmission of disease/parasites/other pest species	10	
Direct predation of native animals	15	
More than one of the above modes	20	20,40
2.5 Determinal intermedians with multi-smaller on an demonstration		
2.5 Potential interactions with vulnerable or endangered species	_	
Species has little overlap with vulnerable or endangered species	2	
Species has minor overlap with vulnerable or endangered species	10	110
Species has moderate overlap with vulnerable or endangered species	20	110
Species has major overlap with vulnerable or endangered species	30	
Ecological overlap unknown	15	
Total for 2.4		
Total for Sections 2.1 – 2.3	50	
Total for Sections 2.1 – 2.5	50	
10tal 101 Sections 2.4 – 2.5	30	
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	
3. Feasibility of Control		
3.1General susceptibility to control		
a. Dispersal/mobility		
Individuals/populations are sedentary or have established tracks/movements	5	
Adults/juveniles are seasonally dispersive	10	
Adults/juveniles are continuous dispersive	15	40

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
b. Life history stage susceptible to control		
all stages	5	40
sub-group of stages	7	- 10
single stage	10	

c. Temporal avialability		
Continuously	5	40
Seasonally	7	
Restricted	10	
d. Recovery rate		
Multiple reproductive events over an extended time period	5	40
Multiple reproductive events over a short time period	10	
Single reproductive event	15	
Unknown	7	
Total for Section 3.1		
3.2. Control Measures		
a. Present control measures		
Control measures exist	2	40,20
Control measures being developed	5	
Control measures do not exist	45	
b. Effectiveness of current control measures		
Highly effective	2	
Moderately effective	5	40,105
Low effectiveness	10	
Unknown	5	
c. Logistic difficulty of implementation		
Low	2	
Moderate	5	105
High	10	
d. Potential to develop resistance to control measures		
Low	1	
Moderate	3	
High	5	
Unknown	3	
O MARIO III	3	
e. Cost		
Low	1	
Moderate	3	
High	5	105
Unknown	3	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
f. Level of control effort required		
One application of one control measure is successful	1	
Multiple application of single control measure	5	
One application of multiple control measures required	10	
Multiple applications of multiple control measures required	15	40
Total for Section 3.1	55	
Total for Section 3.2	45	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	
4. Negative Impact of control/potential measures		
4.1 Habitat impacts		
Minimal physical alteration to habitat	5	
Moderate physical alterations to habitat	10	40,105
Major physical alterations to habitat	25	
Unknown	12	
4.2 Native Population Impacts		
Control measures affect few individuals of some species	5	
Control measures impact moderate numbers of individuals of several species	10	40,105
Control measures impact large numbers of individuals of most species	25	
Unknown	12	
4.3 Other pest species		
Control measures release other pest species with minor enhancement of impacts	5	
Control measures release other pest species with moderate enhancement of impacts	10	20,40
Control measures release other pest species with major enhancement of impacts	25	
Unknown	12	
4.4 Length of Impact		
Short term (up to several weeks)	5	
Medium term (one season or reproductive cycle)	10	40,105
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25	
Unknown	15	
TOTAL FOR OPERATION A ANGLETING IMPACT OF CONTROL MELOVING		
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Fox	ref	Cat	ref	Rabbit	ref	Brown Hare	ref	House Mouse	ref	Pig	Ref	Horse
1. Level of Current impact		1							! !					
1.1 Distribution		- 1							I I			- 1		
a. Distribution and abundance relative to Wet Tropics Bioregion		- 1				1			1			1		
Established populations abut the Wet Tropics Bioregion	2								1			- 1		
									! !			1		
Established populations exist	10	10	92	10	2	10	2,94,4	10	2,3	10	2,92	10	64,2,40	10
b. Wet Tropics Bioregion Provinces in which species is present.									<u>1</u> ! I					
Kirrama-Hinchinbrook	4	4				4			I I	4		1		
Paluma-Seaview Paluma-Seaview	4					4			1			I		
Macalister	4	4							1	4		I I		
Bellenden Ker	4	1				4			I I	4		1		
Atherton	4	4							1	4		I		
Herbert	4	1				4		4	I I	4		I		4
Tully	4	1							I I	4		1		
Innisfail	4					4			1	4		I		
Daintree-Bloomfield	4	1							i i	4		Î		
Total		12	4,5,120,127	0		20	2,3	4	2,3	32	2,3	0		4
Present in all	40			40	2]]			40	2,4	
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))														
Kirrama-Hinchinbrook (1x2)+(5x1)	7	į							į			į		
Paluma-Seaview (1x2)+(7x1)	9	į							į			į		
Macalister $(4x2)+(1x1)$	9	į							į			į		
Bellenden Ker (4x2)+(2x1)	10	13	92,4						i			į		
Atherton $(5x2)+(3x1)$	13	i							i			i		
Herbert (8x2)+(5x1)	21	į						21	2,3			į		21
Tully (11x2)+(5x1)	27	į							į			į		
Innisfail (11x2)+(7x1)	29	i				29	2,3		i	29	2,3,92	i		
Daintree-Bloomfield (12x2)+(6x1)	30	i		30	2				! !			30	20,24,2	
d. Distribution and Abundance		- :							<u>:</u> :			:		
Small populations, patchy distribution	5	5	92,4	5	89	5	2	5	2,3,94	5	2	i		5
Small populations, continuous distribution	10	i	,						. ,- , ! !		<u> </u>	i		
Large populations, patchy distribution	10	i							1			10	20,8	1
Large populations, continuous distribution	20	i							! !					
Total for Section 1.1	100	40		85		64		40	į	76		90		40

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Fox	ref	Cat	ref	Rabbit	ref	Brown Hare	ref	House Mouse	ref	Pig	Ref	Horse
												!		
1.2 Direct effects on native species distributions and abundances										i				
Species has exhibited no detectable effect	1											1 :		1
Minor modification to native species distributions and abundances	10									10	121	t i		
Moderate modification to native species distributions and abundances	20											1		
Major modification to native species distributions and abundances	30	30	4	30	89,4							30	8,40	
Responsible for extinction of native species	50													
Impact Unknown	25					25		25				<u> </u>		
		l								i		i		
1.3 Ecological interaction with vulnerable or endangered species										i		ļ i		
Species has no or little interaction with vulnerable or endangered species	1											1 !		
Species has minor interaction with vulnerable or endangered species	20													
Species has moderate interaction with vulnerable or endangered species	30			30	4							30	20,8	
Species has major interaction with vulnerable or endangered species	50											Ti		
Ecological interaction unknown	25	25				25		25		25		1		25
												İ		
Total for Section 1.1	100	40		85		64		40		76		90		40
Total for Section 1.2 - 1.3	100	55		60		50		50		35		60		26
												1		
TOTAL FOR SECTION 1 - CURRENT LEVEL OF IMPACT	200	95		145		114		90		111		150		66
2. Pest potential												i		
										i		į		
2.1 Known level of impact in other natural areas												نــــــــــــــــــــــــــــــــــــــ		
Not known to cause impacts in any other natural areas	1											<u> </u>		
Known to cause impacts in natural areas, but in other habitats and different climates	2	2	40,100,127			2	20,94	2	94	2	94	<u> </u>		2
Known to cause low impact in natural areas in similar habitats and climate zones	5	i										į		
Known to cause moderate impact in natural areas in similar habitats and climates	10	i								ļ				
Known to cause high impact in natural areas in similar habitats and climate zones.	15			15	40,89		i I					15	27,40	
												 		
2.2 Reproductive Potential												1 :		
a. Reproductive cycles												į į		
Reproduction reliant on specific a-seasonal environmental stimuli	1													
reproduction remain on specific a-seasonar environmental stillian												l i		2
Seasonal	2													
	2 4	4	94,100	4	89,94	4	94	4	94	4	94	4	8,20,24	
Seasonal Multiple reproductive events/season Continuous breeding	4 5	4	94,100	4	89,94	4	94	4	94	4	94	4	8,20,24	
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual	4 5 5	4	94,100	4	89,94	4	94	4	94	4	94	4	8,20,24	
Seasonal Multiple reproductive events/season Continuous breeding	4 5					4	94			4	94			
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown	4 5 5					4				4	94			
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output	4 5 5 3					·				4	94			
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output Low (<3 offspring/cycle)	4 5 5 3													1
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output Low (<3 offspring/cycle) Moderate (3 – 10 offspring/cycle)	5 5 3 1 3					·				3	94			1
Seasonal Multiple reproductive events/season Continuous breeding Able to reproduce from one individual Unknown b. Reproductive output Low (<3 offspring/cycle)	4 5 5 3													1

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Fox	ref	Cat	ref	Rabbit	ref	Brown Hare	ref	House Mouse	ref	Pig	Ref	Horse
c. Offspring viability		!			! !				! !			ļ		
Low	1	1		1	89	1	89		I I			i		
Moderate	3	!			! !				1			3	8,24	
High	5	5	94,100		I I			5	94	5	94	i		
Unknown	3	!			! !				1			!		3
Total for Section 2.2	15	12		8	! !	8		12	! !	12		10		6
2.3 Dispersal ability		!			! :		1		! !			1		
Low potential for dispersal	5				· !							† :		
Moderate potential for dispersal	10				:							1 :		
Dispersal associated with human movement	15			15	89			15	94	15	94	1 :		
High potential for dispersal	20	20	94,100	13	. 07	20	94	13	- /1	13	74	20	8,26	
Unknown potential	10	20	74,100		<u> </u>	20	/4					20	0,20	10
Onknown potential	10				i !				<u>.</u>					10
Total for Sections 2.1 – 2.3	50	34		38	: 	30		29	i I	29		45		18
2.4 Mode of Impact					! !!				1 1			1		<u> </u>
Degradation/deprivation of habitat	5	<u> </u>			<u> </u>		<u> </u>		l I	5	94	1	8,24,40	5
Competition for food and reproductive resources	5	1			ı I	5	20	5	94			† †	24,40	
Transmission of disease/parasites/other pest species	10	1			l I	10	20	,	1 77			† †	27,16	
Direct predation of native animals	15	I			i I	10	20		I I			+	40	
More than one of the above modes	20	20	20	20	40,89		<u> </u>		1		l I	20		
Whole than one of the above modes	20	20	20	20	1 70,07		<u> </u>		I I		l I	20		-
2.5 Potential interactions with vulnerable or endangered species		!			ļ ¦				!			!		
Species has little overlap with vulnerable or endangered species	2	I			!					2	2	i		
Species has minor overlap with vulnerable or endangered species	10	I			!							i		
Species has moderate overlap with vulnerable or endangered species	20	20	4	20	89,40				I .			20	24	
Species has major overlap with vulnerable or endangered species	30	Ī			!				i i			i		
Ecological overlap unknown	15	!			ļ i	15		15	1			!		15
Total for 2.4		20		20	i I	15		5	i i	5		20		5
Transfer Courts at 22	50	34		38	<u>'</u>	30		29	!	29		45		18
Total for Sections 2.1 – 2.3 Total for Sections 2.4 – 2.5	50	40		40	! !	30		29	-	7		40		20
1 oral for Sections 2.4 – 2.5	50	40		40	! !	30	<u>!</u>	20	I	/		40		20
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	74		78	! ! !	60		49	! ! !	36		85		38
					! :				i					
3. Feasibility of Control		!			!				!			!		
3.1General susceptibility to control					<u>:</u>				i			<u> </u>		
a. Dispersal/mobility		i			i				<u> </u>			<u> </u>		
Individuals/populations are sedentary or have established tracks/movements	5	i			i				<u>:</u>			i		5
Adults/juveniles are seasonally dispersive	10	10	94,100		i	10	94	10	94	10	94	10	8	
Adults/juveniles are continuous dispersive	15	i		15	40,89				i			i		
·		i							i			1		

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Fox	ref	Cat	ref	Rabbit	ref	Brown Hare	ref	House Mouse	ref	Pig	Ref	Horse
b. Life history stage susceptible to control		į			i !		i I					İ		
all stages	5	5	94,100	5	89	5	94			5	94	5	8,73,74	5
sub-group of stages	7	į	'		į		!	7	94			Ì		
single stage	10	į			! !		! !					ļ į		
T. T		-			!		! !					- !		
c. Temporal avialability	-	5	94,100	-	89	-	0.4	-	0.4			-	0.20.72.74	-
Continuously	5	3	94,100	5	89	5	94	5	94			3	8,20,73,74	5
Seasonally	7	i					<u> </u>			7	94	ļ		
Restricted	10	i			! !		! ! !			i		i		
d. Recovery rate		1			! !		<u> </u> 		<u> </u>					
Multiple reproductive events over an extended time period	5	i			! !		! ! :							5
Multiple reproductive events over a short time period	10	10	94,100	10	89	10	94	10	94	10	94	1 !		
Single reproductive event	15	- 0	,		. ~~ !	1		10				15	73	
Unknown	7	i			! !	1	I I							
Total for Section 3.1	İ	30		35	i i	30	i	32		32		35		20
		i			į		i			i		į		
3.2. Control Measures		-			i i							i		
a. Present control measures		i			!							i		
Control measures exist	2	2	20,40,94,100	2	89		! !	2	94	2	108	2	8	2
Control measures being developed	5	į			!	5	98							
Control measures do not exist	45	!			!		l					ļ		
					!		! !					!		
b. Effectiveness of current control measures	2				<u>:</u>		<u> </u>					1 :		
Highly effective	2	:			<u>.</u>		<u>!</u>			-	100	-	73,8	-
Moderately effective	5	10	94,100	10	89	5	98	10	94	5	108	5	/3,8	5
Low effectiveness Unknown	10	10	94,100	10	89	3	98	10	94			1 -		
Olikilowii	3	: 1			<u>:</u> I		<u>i</u> I					1		
c. Logistic difficulty of implementation					I		<u>. </u>		<u>. </u>			1		
Low	2	1			i		l I		!	1		1		
Moderate	5	5 1	100		ı I	5	98		<u>. </u>	5	108	'		
High	10	!		10	89		!	10	94			10	8	10
					ļ							İ		
d. Potential to develop resistance to control measures		!			!		! !			ı		!		
Low	1	1			l :		l			1		1		
Moderate	3	!		3	89		!							
High	5	!			!	5	94	5	94	:		5		
Unknown	3	3			!		!			3		1		3
a Cost		- !			! !		! !					!		
e. Cost	1				<u>:</u>	1	<u>:</u>		1					
Low Moderate	3				:	1	<u>. </u>							
Moderate High	5	5	100	- 5	89	-	!					5		
High Unknown	3	3	100	5	69	3	<u>:</u>	3		3		3		3
LL HIK HOWH	1 .5			1	•		•							1 3

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Fox	ref	Cat	ref	Rabbit	ref	Brown Hare	ref	House Mouse	ref	Pig	Ref	Horse
f. Level of control effort required									! !		! !	!		
One application of one control measure is successful	1	1							! !		! !	ļ ¦		
Multiple application of single control measure	5	l l						5	94	5	108	i		
One application of multiple control measures required	10	1							! !		! !	ļ ¦		
Multiple applications of multiple control measures required	15	15	94	15	89	15	94		! !!		! !!	15	8,40	15
Total for Section 3.1	55	30		35		30		32	! ! !	32	! ! !	35		20
Total for Section 3.2	45	40		45		38		35	! ! !	23	! ! !	42		38
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	70		80		68		67	! ! !	55	! ! !	77		58
4. Negative Impact of control/potential measures									i ! !		i ! !			
4.1 Habitat impacts		1							i I		i I	<u> </u>		
Minimal physical alteration to habitat	5	1						5	94		l I			+
Moderate physical alterations to habitat	10	10	100						! !	10	108			10
Major physical alterations to habitat	25	ľ		25	89	25	94		l I		l I	25	8	
Unknown	12	i							. I		. I	i		+
		i							i		i	i		+
4.2 Native Population Impacts		i							i		i	i		+
Control measures affect few individuals of some species	5	i						5	94			l i		1
Control measures impact moderate numbers of individuals of several species	10	10	40,100	10	89				: 	10	108	10	8	
Control measures impact large numbers of individuals of most species	25	1							l I		l I	1	-	
Unknown	12	 				12			1 		1 			12
4.3 Other pest species		1 							 		 	I		+
Control measures release other pest species with minor enhancement of impacts	5								l I		l I			
Control measures release other pest species with moderate enhancement of impacts	10	10	94,100	10	89	10	94,20		!		!	10	8	
Control measures release other pest species with major enhancement of impacts	25	į							!		!	i		
Unknown	12	1						12	! !	12	! ! !	<u> </u>		12
4.4 Length of Impact									1 		1 			
Short term (up to several weeks)	5	i						5	94	5	108			
Medium term (one season or reproductive cycle)	10	i							<u> </u>		<u> </u>	<u> </u>		10
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25			25	89				! !		! !	25	8	
Unknown	15	15]]	15			I I I		I I I	1		
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		45		70		62		27	i !	37	i !	70		44

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
1. Level of Current impact		
1.1 Distribution		
a. Distribution and abundance relative to Wet Tropics Bioregion		
Established populations abut the Wet Tropics Bioregion	2	
	_	
Established populations exist	10	2,21
b. Wet Tropics Bioregion Provinces in which species is present.		
Kirrama-Hinchinbrook	4	
Paluma-Seaview	4	
Macalister	4	
Bellenden Ker	4	
Atherton	4	
Herbert	4	2,3
Tully	4	
Innisfail	4	
Daintree-Bloomfield	4	
Total		
Present in all	40	
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see		
Appendix 1 Map of Wet Tropics Bioregion)		
Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))		
Kirrama-Hinchinbrook (1x2)+(5x1)	7	
Paluma-Seaview (1x2)+(7x1)	9	
Macalister (4x2)+(1x1)	9	
Bellenden Ker (4x2)+(2x1)	10	
Atherton (5x2)+(3x1)	13	
Herbert (8x2)+(5x1)	21	2.3
Tully (11x2)+(5x1)	27	2,5
Innisfail (11x2)+(7x1)	29	
Daintree-Bloomfield (12x2)+(6x1)	30	
Bunder Bloomford (12x2)*(0x1)	30	
d. Distribution and Abundance		
Small populations, patchy distribution	5	2
Small populations, continuous distribution	10	
Large populations, patchy distribution	10	
Large populations, continuous distribution	20	
	100	
Total for Section 1.1	100	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
1.2 Direct effects on native species distributions and abundances		
Species has exhibited no detectable effect	1	
Minor modification to native species distributions and abundances	10	
Moderate modification to native species distributions and abundances	20	
Major modification to native species distributions and abundances	30	
Responsible for extinction of native species	50	
Impact Unknown	25	
1.3 Ecological interaction with vulnerable or endangered species		
Species has no or little interaction with vulnerable or endangered species	1	
_ ^		
Species has minor interaction with vulnerable or endangered species	20	
Species has moderate interaction with vulnerable or endangered species	30	
Species has major interaction with vulnerable or endangered species	50	
Ecological interaction unknown	25	
Total for Section 1.1	100	
Total for Section 1.1 Total for Section 1.2 - 1.3	100	
Total for Section 1.2 - 1.5	100	
TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	
	-00	
2. Pest potential		
•		
2.1 Known level of impact in other natural areas		
Not known to cause impacts in any other natural areas	1	
Known to cause impacts in natural areas, but in other habitats and different climates	2	94
Known to cause low impact in natural areas in similar habitats and climate zones	5	
Known to cause moderate impact in natural areas in similar habitats and climates	10	
Known to cause high impact in natural areas in similar habitats and climate zones.	15	
2.2 Reproductive Potential		
a. Reproductive cycles		
Reproduction reliant on specific a-seasonal environmental stimuli	1	
Seasonal	2	97
Multiple reproductive events/season	4	
Continuous breeding	5	
Able to reproduce from one individual	5	
Unknown	3	
b. Reproductive output		
Low (<3 offspring/cycle)	1	97
Moderate (3 – 10 offspring/cycle)	3	7/
High (>10/cycle)	5	
Unknown	3	
CHARLOWN	,	
	1	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
c. Offspring viability		
Low	1	
Moderate	3	
High	5	
Unknown	3	
Total for Section 2.2	15	
2.3 Dispersal ability		
Low potential for dispersal	5	
Moderate potential for dispersal	10	
Dispersal associated with human movement	15	95
High potential for dispersal	20	
Unknown potential	10	
Total for Sections 2.1 – 2.3	50	
2.4 Mode of Impact		
Degradation/deprivation of habitat	5	40
Competition for food and reproductive resources	5	
Transmission of disease/parasites/other pest species	10	
Direct predation of native animals	15	
More than one of the above modes	20	
Note than one of the above modes	20	
2.5 Potential interactions with vulnerable or endangered species		
Species has little overlap with vulnerable or endangered species	2	
Species has minor overlap with vulnerable or endangered species	10	
Species has moderate overlap with vulnerable or endangered species	20	
Species has major overlap with vulnerable or endangered species	30	
Ecological overlap unknown	15	
Total for 2.4		
2000.201		
Total for Sections 2.1 – 2.3	50	
Total for Sections 2.4 – 2.5	50	
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	
3. Feasibility of Control		
3.1General susceptibility to control		
a. Dispersal/mobility		
Individuals/populations are sedentary or have established tracks/movements	5	97
Adults/juveniles are seasonally dispersive	10	
Adults/juveniles are continuous dispersive	15	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
b. Life history stage susceptible to control		
all stages	5	97
sub-group of stages	7	
single stage	10	
- 		
c. Temporal avialability		
Continuously	5	97
Seasonally	7	
Restricted	10	
d. Recovery rate		
Multiple reproductive events over an extended time period	5	97
Multiple reproductive events over a short time period	10	
Single reproductive event	15	
Unknown	7	
Total for Section 3.1		
3.2. Control Measures		
a. Present control measures		
Control measures exist	2	97
Control measures being developed	5	
Control measures do not exist	45	
b. Effectiveness of current control measures		
Highly effective	2	
Moderately effective	5	97
Low effectiveness	10	
Unknown	5	
c. Logistic difficulty of implementation		
Low	2	
Moderate	5	
High	10	97
d. Potential to develop resistance to control measures		
Low	1	
Moderate Control of the Control of t	3	
High	5	
Unknown	3	
OHRHOTH I	,	
e. Cost	1	
Low	1	
Moderate	3	
High	5	
Unknown	3	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	ref
f. Level of control effort required		
One application of one control measure is successful	1	
Multiple application of single control measure	5	
One application of multiple control measures required	10	
Multiple applications of multiple control measures required	15	40
Total for Section 3.1	55	
Total for Section 3.2	45	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	
4. Negative Impact of control/potential measures		
4.1 Habitat impacts		
Minimal physical alteration to habitat	5	
Moderate physical alterations to habitat	10	40
Major physical alterations to habitat	25	
Unknown	12	
4.2 Native Population Impacts		
Control measures affect few individuals of some species	5	
Control measures impact moderate numbers of individuals of several species	10	
Control measures impact large numbers of individuals of most species	25	
Unknown	12	
4.3 Other pest species		
Control measures release other pest species with minor enhancement of impacts	5	
Control measures release other pest species with moderate enhancement of impacts	10	
Control measures release other pest species with major enhancement of impacts	25	
Unknown	12	
4.4 Length of Impact		
Short term (up to several weeks)	5	
Medium term (one season or reproductive cycle)	10	40,21
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25	-
Unknown	15	
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Rusa Deer	ref	Chital Deer	ref	Fallow Deer	ref	Goat	Refs
1. Level of Current impact			! !		! !				
1.1 Distribution			l I		l I				
a. Distribution and abundance relative to Wet Tropics Bioregion			<u> </u>		<u> </u>				
Established populations abut the Wet Tropics Bioregion	2	2	21,94	2	21,5	2	21,5	2	2,20,21
			21,74	2	21,3	2	21,3	2	2,20,21
Established populations exist	10		! ! !		! ! !				<u></u>
b. Wet Tropics Bioregion Provinces in which species is present.]]]]		<u> </u>		<u> </u>
Kirrama-Hinchinbrook	4		į		į				
Paluma-Seaview	4		į		į				
Macalister	4		i i		i i				
Bellenden Ker	4		! !		! !				
Atherton	4		!		!				
Herbert	4		i I		i I				
Tully	4		! !		! !				l .
Innisfail	4		i I		i I				
Daintree-Bloomfield	4		! !		! !				<u> </u>
Total		0	! !	0	! !	0		0	l
Present in all	40		! !		! !				
c. Most significant province of the Wet Tropics Bioregion where the species occurs (tick one only) (see Appendix 1 Map of Wet Tropics Bioregion) Province (#endangered regional ecosystems (x2))+(# regional ecosystems of concern (x1))			 		 				
Kirrama-Hinchinbrook (1x2)+(5x1)	7		į		į				
Paluma-Seaview (1x2)+(7x1)	9		į		į				
Macalister (4x2)+(1x1)	9		i !		i !				
Bellenden Ker (4x2)+(2x1)	10		į		į				i •
Atherton $(5x2)+(3x1)$	13		İ		İ				1
Herbert (8x2)+(5x1)	21		į		į				1
Tully (11x2)+(5x1)	27		į		į				
Innisfail (11x2)+(7x1)	29		į		į				
Daintree-Bloomfield (12x2)+(6x1)	30		į		į				
			į		į				
d. Distribution and Abundance			!		!				
Small populations, patchy distribution	5		!		!				
Small populations, continuous distribution	10		! !		! !				I
Large populations, patchy distribution	10		! !		! !				
Large populations, continuous distribution	20		I I		I I				
			! !		! !				
Total for Section 1.1	100	2	i	2	i	2		2	

1.2 Direct effects on native species distributions and abundances	WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Rusa Deer	ref	Chital Deer	ref	Fallow Deer	ref	Goat	Refs
Species has exhibited no detectable effect				1		! !		! !		
Minor modification to native species distributions and abundances	**] 						
Moderate modification to native species distributions and abundances 20	Species has exhibited no detectable effect	1	1	21,94	1	21,5	1	21,5	1	2,20,21
Major modification to native species distributions and abundances	Minor modification to native species distributions and abundances	10		i I		i		i		
Responsible for extinction of native species S0	Moderate modification to native species distributions and abundances	20		I I		I I		I I		
Responsible for extinction of native species S0	Major modification to native species distributions and abundances	30		I I		I I		I I		
1 1 21,94 1 21,5 1 21,5 1 2,02,21		50		I I		I I		I I		
Species has no or little interaction with vulnerable or endangered species 1	Impact Unknown	25		1		! !		! !		
Species has no or little interaction with vulnerable or endangered species 1	1.3 Feelogical interaction with vulnerable or and appeared species			<u>i</u>		i 1		i 1		
Species has minor interaction with vulnerable or endangered species 20		1	1	21.04	1	21.5	1	21.5	1	2 20 21
Species has moderate interaction with vulnerable or endangered species 30		_	1	1 21,74	1	1 21,3	1	1 21,3	1	2,20,21
Species has major interaction with vulnerable or endangered species 50				l I		! !		! !		
Ecological interaction unknown]]		l I		l I		
Total for Section 1.1				l İ		! !		! !		
Total for Section 1.2 - 1.3	Ecological interaction unknown	25] 		! !		! !		
Total for Section 1.2 - 1.3	Total for Section 1.1	100	2	1	2	!	2	!	2	
TOTAL FOR SECTION 1 - CURRENT LEVEL OF IMPACT 200 4 4 4 4 4 4 4 2				1						
2. Pest potential 2. I Known level of impact in other natural areas Not known to cause impacts in any other natural areas Known to cause impacts in natural areas, but in other habitats and different climates Experiment of cause impacts in natural areas, but in other habitats and climate zones Experiment of cause low impact in natural areas in similar habitats and climate zones Experiment of cause low impact in natural areas in similar habitats and climate zones Experiment of cause low impact in natural areas in similar habitats and climates Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habitats and climate zones. Experiment of cause high impact in natural areas in similar habita	Town for section 112 Tip	100		<u>:</u> I		<u>: </u>	-	<u>: </u>		
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Not known to cause impacts in natural areas, but in other habitats and different climates 2 2 2 21,99 2 21 2 21 2 103 Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climate zones Known to cause high impact in natural areas in similar habitats and climates 10 Known to cause high impact in natural areas in similar habitats and climate zones. 15 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli 1 Seasonal 2 Multiple reproductive events/season 4 4 94,21 4 94,21 4 103 Continuous breeding 5 5 21 Able to reproduce from one individual 5 Unknown 3	TOTAL FOR SECTION 1 – CURRENT LEVEL OF IMPACT	200	4	!	4	! !	4	! !	4	
2.1 Known level of impact in other natural areas Not known to cause impacts in any other natural areas Not known to cause impacts in natural areas, but in other habitats and different climates 2 2 2 21,99 2 21 2 21 2 103 Known to cause low impact in natural areas in similar habitats and climate zones Known to cause moderate impact in natural areas in similar habitats and climate zones Known to cause high impact in natural areas in similar habitats and climates 10 Known to cause high impact in natural areas in similar habitats and climate zones. 15 2.2 Reproductive Potential a. Reproductive Potential a. Reproductive cycles Reproduction reliant on specific a-seasonal environmental stimuli 1 Seasonal 2 Multiple reproductive events/season 4 4 94,21 4 94,21 4 103 Continuous breeding 5 5 21 Able to reproduce from one individual 5 Unknown 3				† 		1		1		
Not known to cause impacts in any other natural areas 1	2. Pest potential					1		1		
Not known to cause impacts in any other natural areas 1	21 Variable of Character of Cha			1		<u>i</u>		<u>i</u>		
Known to cause impacts in natural areas, but in other habitats and different climates 2 2 21,99 2 21 2 21 2 103	, <u>, , , , , , , , , , , , , , , , , , </u>	1		1		1		1		
Known to cause low impact in natural areas in similar habitats and climate zones 5		1	_	21.00	_	1 21	_	1 21	1	102
Known to cause moderate impact in natural areas in similar habitats and climates 10	* '			21,99		21		21		103
Known to cause high impact in natural areas in similar habitats and climate zones. 15				<u>!</u>		!		!		
2.2 Reproductive Potential				!		-		-		
a. Reproductive cycles 1 <td>Known to cause high impact in natural areas in similar habitats and climate zones.</td> <td>15</td> <td></td> <td>! !</td> <td></td> <td>! !</td> <td></td> <td>! !</td> <td></td> <td></td>	Known to cause high impact in natural areas in similar habitats and climate zones.	15		! !		! !		! !		
a. Reproductive cycles 1 <td>2.2. Dames de estina Destructival</td> <td></td> <td></td> <td>!</td> <td></td> <td>! !</td> <td></td> <td>! !</td> <td></td> <td></td>	2.2. Dames de estina Destructival			!		! !		! !		
Reproduction reliant on specific a-seasonal environmental stimuli 1				<u> </u>						
Seasonal 2 4 4 94,21 4 94,21 4 103 Continuous breeding 5 5 21 5 5 21 5 5 21 5 6 7		1				.		.		
Multiple reproductive events/season 4 4 94,21 4 94,21 4 94,21 4 103 Continuous breeding 5 5 21 5 5 1				<u>i </u>		<u> </u>		<u> </u>		
Continuous breeding 5 5 21 Able to reproduce from one individual 5 Unknown 3 b. Reproductive output Low (<3 offspring/cycle)				i i	4	94 21	4	94 21	4	103
Able to reproduce from one individual 5 Unknown 3 S S S S S S S S S S S S S S S S S S			5	21	7	77,21	7	77,21		103
Unknown 3 b. Reproductive output 5 Low (<3 offspring/cycle)				<u> </u>						
Low (<3 offspring/cycle)				!		!		!		
Low (<3 offspring/cycle)				i		i		i		
Moderate (3 – 10 offspring/cycle) 3 High (>10/cycle) 5				1						
High (>10/cycle) 5			1	94	1	94	1	94	1	21
	Moderate (3 – 10 offspring/cycle)			l +		<u> </u>		<u> </u>	ļ	
Unknown 3				! !		<u> </u>		<u> </u>	ļ	
	Unknown	3		!		!		!	ļ	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Rusa Deer	ref	Chital Deer	ref	Fallow Deer	ref	Goat	Refs
c. Offspring viability			1		! !			!	
Low	1		į					İ	
Moderate	3		i i		l I			3	103
High	5		i i		!				
Unknown	3	3	į	3		3		İ	
Total for Section 2.2	15	9	i I	8	i I	8		8	
			<u>i</u>		<u> </u>			i	
2.3 Dispersal ability			1		!				
Low potential for dispersal	5		1		!			ļ ļ	
Moderate potential for dispersal	10		<u>i</u>	10	21	10	21	į	
Dispersal associated with human movement	15		1		ļ			į	
High potential for dispersal	20	20	40,21		<u> </u>			20	103
Unknown potential	10		<u>i</u>		i !			i	
Total for Sections 2.1 – 2.3	50	31		20		20		30	
2 (M. L. Clause)			1		l L			!	
2.4 Mode of Impact	-		<u>.</u>		<u> </u>			i	
Degradation/deprivation of habitat	5		<u>.</u>		<u>.</u>			<u> </u>	
Competition for food and reproductive resources	5	10	21	10	21	10	21	<u> </u>	
Transmission of disease/parasites/other pest species	10	10	21	10	21	10	21	ļ i	
Direct predation of native animals	15		!		! !				
More than one of the above modes	20		<u> </u> 		! !!			20	103
2.5 Potential interactions with vulnerable or endangered species			<u> </u> 		<u> </u> 			!	
Species has little overlap with vulnerable or endangered species	2		1		! !			l l	
Species has minor overlap with vulnerable or endangered species	10]		I I			ļ	
Species has moderate overlap with vulnerable or endangered species	20		!		ļ	!		!	
Species has major overlap with vulnerable or endangered species	30		İ		İ			Ì	
Ecological overlap unknown	15	15	İ	15	İ	15		15	
Total for 2.4		10	i I	10	i I	10		20	
Total for Sections 2.1 – 2.3	50	21	<u>!</u>	20	! ! •	20		20	
Total for Sections 2.4 – 2.5	50 50	31 25	1	20 25	! !	20 25		30 35	
Total for Sections 2.4 – 2.5	30	25	! !	25	<u>!</u> I	25		33	
TOTAL FOR SECTION 2 – POTENTIAL IMPACT	100	56	! !	45	l I	45		65	
2 F., 222 - 2 C			i		i			i	
3. Feasibility of Control			:		<u> </u>				
3.1General susceptibility to control			!		i i			ij	
a. Dispersal/mobility			1	ļ	!		1	ļ <u>i</u>	
Individuals/populations are sedentary or have established tracks/movements	5		1	5	94	5	94	į į	
Adults/juveniles are seasonally dispersive	10	5	21		!			10	103
Adults/juveniles are continuous dispersive	15		į					į į	
			į		<u>.</u>			į	

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Rusa Deer	ref	Chital Deer	ref	Fallow Deer	ref	Goat	Refs
b. Life history stage susceptible to control			i		i		i	i	
all stages	5	5	94	5	94	5	94	5	103
sub-group of stages	7						! !	i	
single stage	10		: ! !		: ! !		: ! !	i	
c. Temporal avialability			:		:		! !		
Continuously	5	5	94	5	94	5	94	5	103
Seasonally	7		1		1		l I	l I	
Restricted	10		!		!		! !		
Robinou	10				!		! !		
d. Recovery rate							! ! :		
Multiple reproductive events over an extended time period	5	5	94				! !		
Multiple reproductive events over a short time period	10			10	94	10	94	10	103
Single reproductive event	15		i	İ	i		 I I		
Unknown	7		i		i		i I	į	
Total for Section 3.1		20	i	25		25	ı I	30	
			i		i		i	i	
3.2. Control Measures							l I	1	
a. Present control measures			!		i		i I	i	
Control measures exist	2	2	94	2	94	2	94	2	103
Control measures being developed	5		l l		l l		! !	i	
Control measures do not exist	45		l I		l I		! !	ı	
			1		1		! 	ı	
b. Effectiveness of current control measures			i i		i i		ı I	i	
Highly effective	2		!		!		l	ı	
Moderately effective	5	5	94,21	5	94,21	5	94,21	5	103
Low effectiveness	10		!		!			i	
Unknown	5		!		!				
			I i		i i		!	l i	
c. Logistic difficulty of implementation			l i		ļ		l I	I	
Low	2		1		1		l	I	
Moderate	5	5	94,21	5	94,21	5	94,21	Į.	
High	10		1		1		! !	10	103
d. Potential to develop resistance to control measures			<u>:</u> !		<u>:</u> !		i	<u> </u>	
Low	1		i i		i i		ı I	i	
Moderate	3		!		!		! !		
High	5		!		!		! !	į	
Unknown	3	3	!	3	!	3	 	3	
			! !		! !		! 		
e. Cost			!		!		! :	<u> </u>	
Low	1		! !		! !		l 		
Moderate	3		1		1		!		
High	5		!		!		! :	5	103
Unknown	3	3	!	3	!	3	!		
			1		1		! !		

WET TROPICS VERTEBRATE PEST RISK ASSESSMENTS	Score	Rusa Deer	ref	Chital Deer	ref	Fallow Deer	ref	Goat	Refs
f. Level of control effort required			! !		! !		! !	!	
One application of one control measure is successful	1		! !		! !		! !	l I	
Multiple application of single control measure	5	5	21	5	21	5	21	l i	
One application of multiple control measures required	10		! !		I I		! !	l	
Multiple applications of multiple control measures required	15		! ! !		! ! !		! ! !	15	103
Total for Section 3.1	55	20	l I I	25	I I I	25	l I I	30	
Total for Section 3.2	45	23	 	20	! !	20	 	37	
TOTAL FOR SECTION 3 – FEASIBILITY OF CONTROL	100	43	! !	45	! !	45	! !	67	
4. Negative Impact of control/potential measures			i I I		i I I		i I I	i	
4.1 Habitat impacts			<u> </u> 		! !		<u> </u> 	I	
Minimal physical alteration to habitat	5		! !		! !		! !	5	103
Moderate physical alterations to habitat	10	10	21	10	20,21	10	20,21	! !	
Major physical alterations to habitat	25		i		i i		i i	l	
Unknown	12		: !		: !		: !	i	
			i		.		i	i	
4.2 Native Population Impacts			i		i		i	i	
Control measures affect few individuals of some species	5	5	20,21	5	20,21	5	20,21	5	103
Control measures impact moderate numbers of individuals of several species	10		: ! !		: ! !		: ! !		
Control measures impact large numbers of individuals of most species	25		l I		i i		l I	i i	
Unknown	12		 		 		 	i	
4.3 Other pest species			 		 		 		
Control measures release other pest species with minor enhancement of impacts	5	5	20,21	5	20,21	5	20,21	5	103
Control measures release other pest species with moderate enhancement of impacts	10		! !		! !		! !	l I	
Control measures release other pest species with major enhancement of impacts	25		i		i		i	i	
Unknown	12		1 1 1		! ! !		1 1 1	1	
4.4 Length of Impact			! !		! !		! !		
Short term (up to several weeks)	5	5	20,21	5	20,21	5	20,21	l l	
Medium term (one season or reproductive cycle)	10		i		i		i	10	103
Long term (more than one year or reproductive cycle/permanent) modification of habitat	25		! ———— !		. ———— !		! ————— !		
Unknown	15		! !		! !		! !		
TOTAL FOR SECTION 4 – NEGATIVE IMPACT OF CONTROL MEASURES		25	: ! !	25	: ! !	25	: ! !	25	