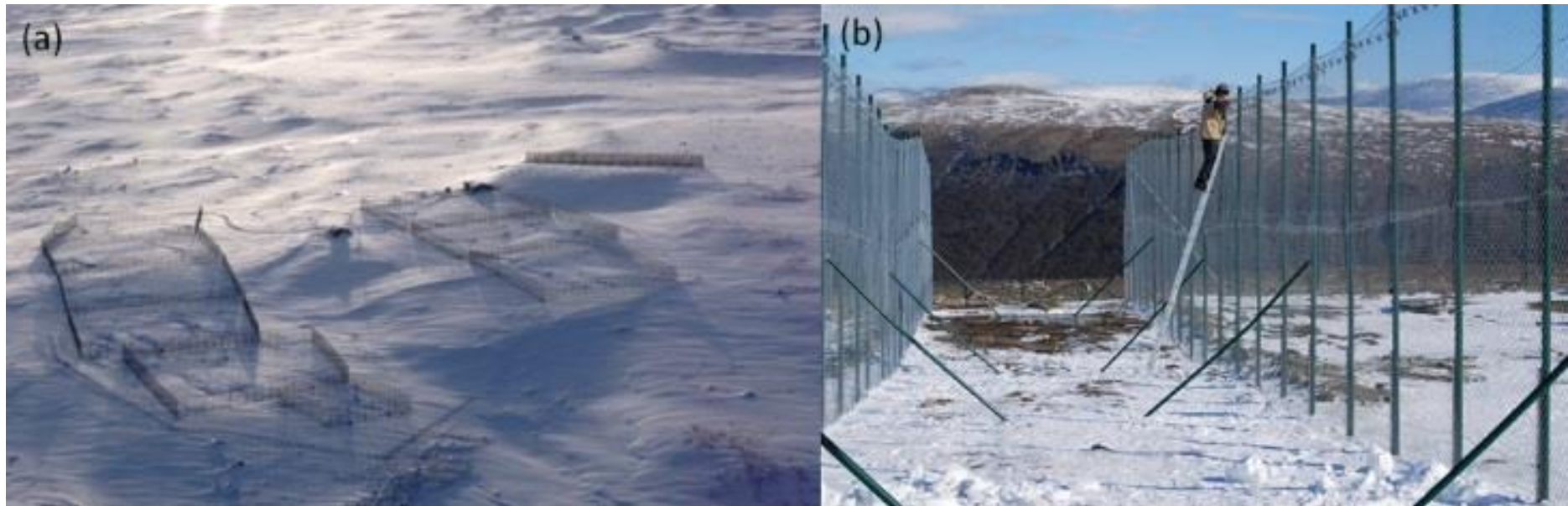
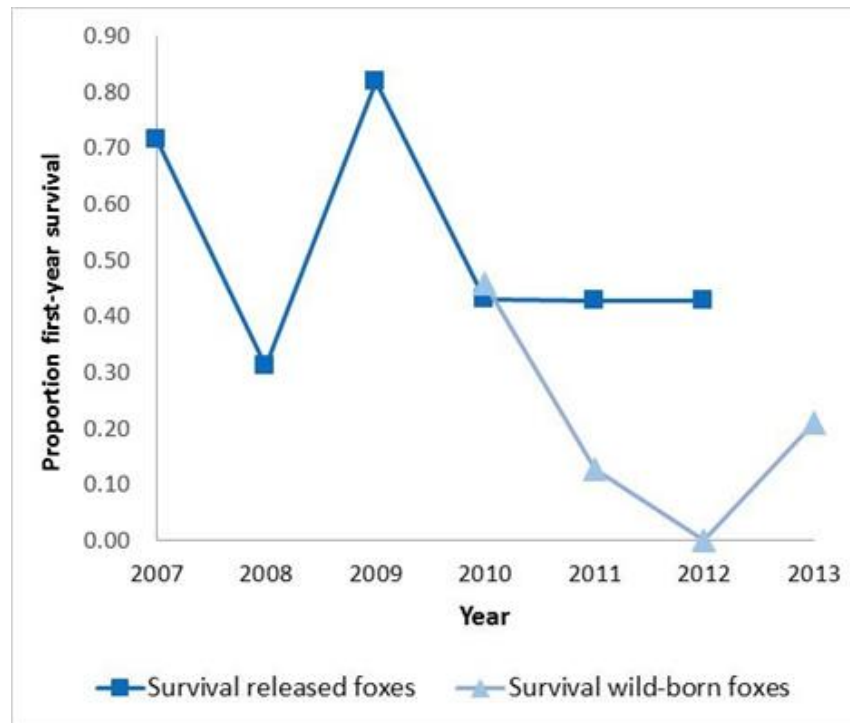


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**Supplementary Fig. S1.** (a) Aerial and (b) ground photographs of the breeding facilities.



**Supplementary Fig. S2.** First year survival for Arctic foxes released in Dovrefjell and Finse during 2007–2012 ( $n = 238$ ) and for wild-born foxes in the same areas during 2010-2013 ( $n = 235$ ).

**Supplementary Table S1.** Score table for evaluation and prioritizing of release areas.

Area	Environmental score <sup>a</sup>	Score time since extinction <sup>b</sup>	Logistics <sup>c</sup>	Need local info <sup>d</sup>	Stepping stone factor <sup>e</sup>	Synergy other research <sup>f</sup>	Sum score	Recent rodent cycles (per 2007)
Hardangervidda	6	1	3	3	2	2	17	Yes
Finse	9	1	3	1	1	2	17	No
Dovrefjell	6	1	3	3	1	3	17	Yes
Forollhogna	3	1	3	2	2	2	13	Yes
Sylane	3	1	3	3	3	2	15	Yes
Blåfjella	3	3	1	2	2	1	12	Yes
Saltfjellet	6	4	2	1	3	1	17	Yes
Hellemobotn/Sitas	1	4	1	1	3	1	11	Yes
Indre Troms	6	4	1	2	1	1	15	Yes
Reisa	3	4	1	2	1	1	12	Yes

<sup>a</sup> Environmental score (model 385) is weighted twice as other variables and is given as the number of recorded dens with >20% probability of breeding as given by model 385 by Herfindal et al. (2010): 9 = >10, 6 = 5-9, 3 = 2-4, 1 = <2. <sup>b</sup> Score time since extinction: 4 = not extinct, 3 = <5 years, 2 = 5-10 years, 1 > 10 years. <sup>c</sup> Logistics: 3 = easy, 2 = average, 1 = difficult. <sup>d</sup> Need for information: 3 = small, 2 = medium, 1 = large. <sup>e</sup> Stepping stone factor: 3 = < 50 km distance to closest Arctic fox population, 2 = 50-100 km and 1 > 100 km. <sup>f</sup> Synergy effects other research: 3 = good, 2 = medium, 1 = small.

**Supplementary Table S2.** Recorded mortality causes of released Arctic fox pups during 2006–2015.

Year released	Area	ID no	Year dead	Cause of death
2007	Dovrefjell	AF0038	2008	Road kill
2008	Dovrefjell	AF0062	2009	Unknown
2008	Dovrefjell	AF0077	2009	Unknown
2008	Dovrefjell	AF0079	2009	Golden eagle predation
2008	Dovrefjell	AF0080	2009	Radio collar found in wolverine den
2008	Dovrefjell	AF0081	2009	Unknown
2008	Dovrefjell	AF0088	2013	Illegal hunt
2010	Finse	AF0114	2011	Road kill
2010	Finse	AF0124	2010	Railroad kill
2010	Finse	AF0125	2010	Mink trap (legal)
2010	Finse	AF0128	2010	Unknown
2010	Finse	AF0177	2010	Railroad kill
2012	Junkeren	AF0239	2012	Road kill
2013	Finse	AF0263	2013	Road kill
2014	Hardangervidda	AF0288	2014	Road kill
2014	Hardangervidda	AF0290	2014	Road kill
2014	Hardangervidda	AF0292	2014	Road kill
2014	Hardangervidda	AF0304	2014	Road kill
2014	Hardangervidda	AF0307	2014	Road kill

**Supplementary Table S3.** Recorded long distance movements/dispersal of released individuals.

No. of foxes	Birth year	Release area	Area dispersed to	Observation year
1	2008	Snøhetta	Finse	2010
3	2009	Snøhetta	Helags (Sweden)	2010-11
4	2010	Junkeren	Vindelfjällen (Sweden)	2011
1	2010	Junkeren	Saltfjellet	2011
1	2011	Finse	Snøhetta	2012
1	2011	Saltfjellet	Junkeren	2012
1	2013	Hardangervidda	Lærdal municipality <sup>a</sup>	2014

<sup>a</sup> Roadkill 130 km from release site.