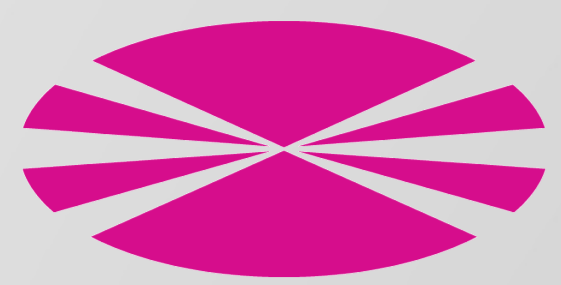


Historical changes in the *Erica mackayana* heathland cover in Galicia, NW Spain



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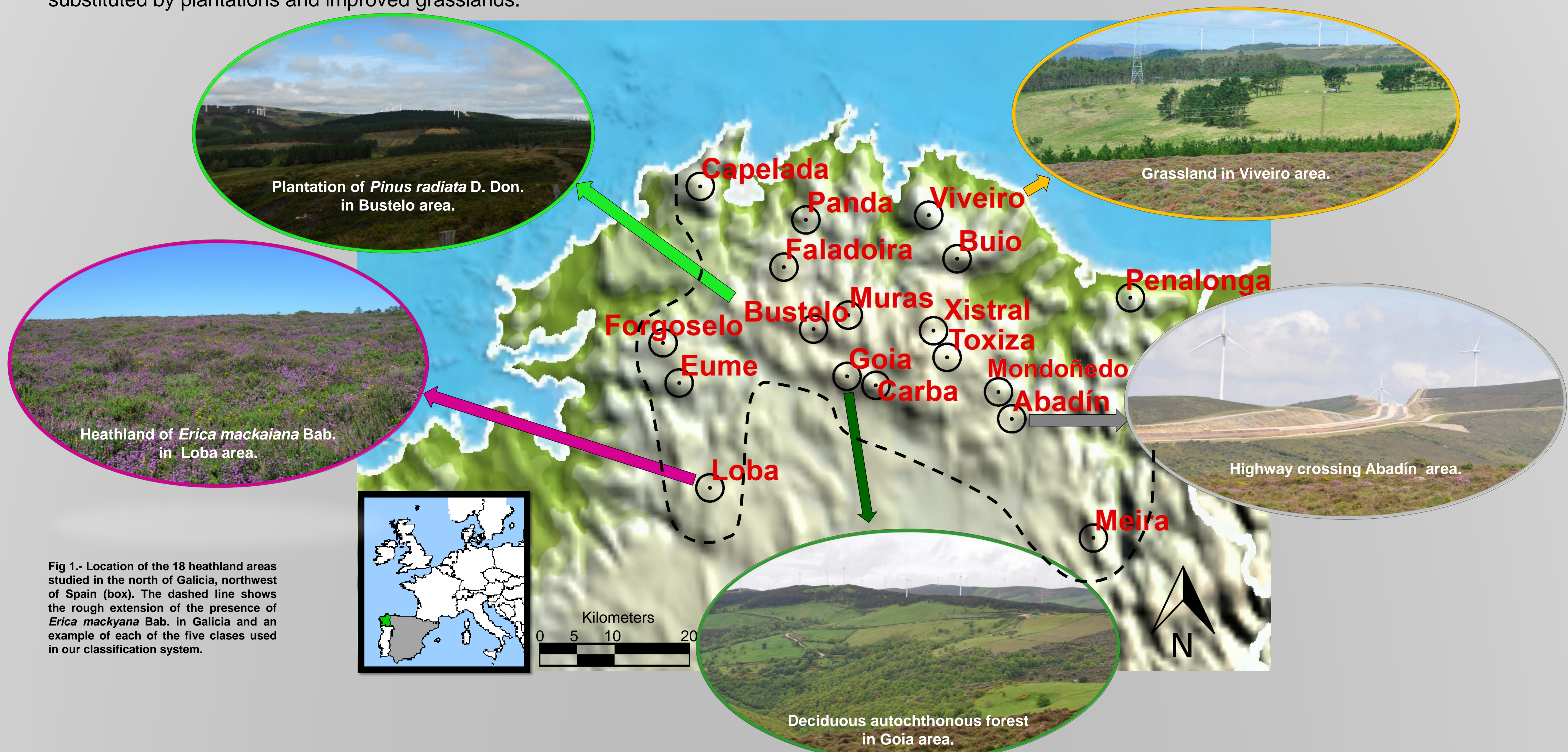
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Introduction

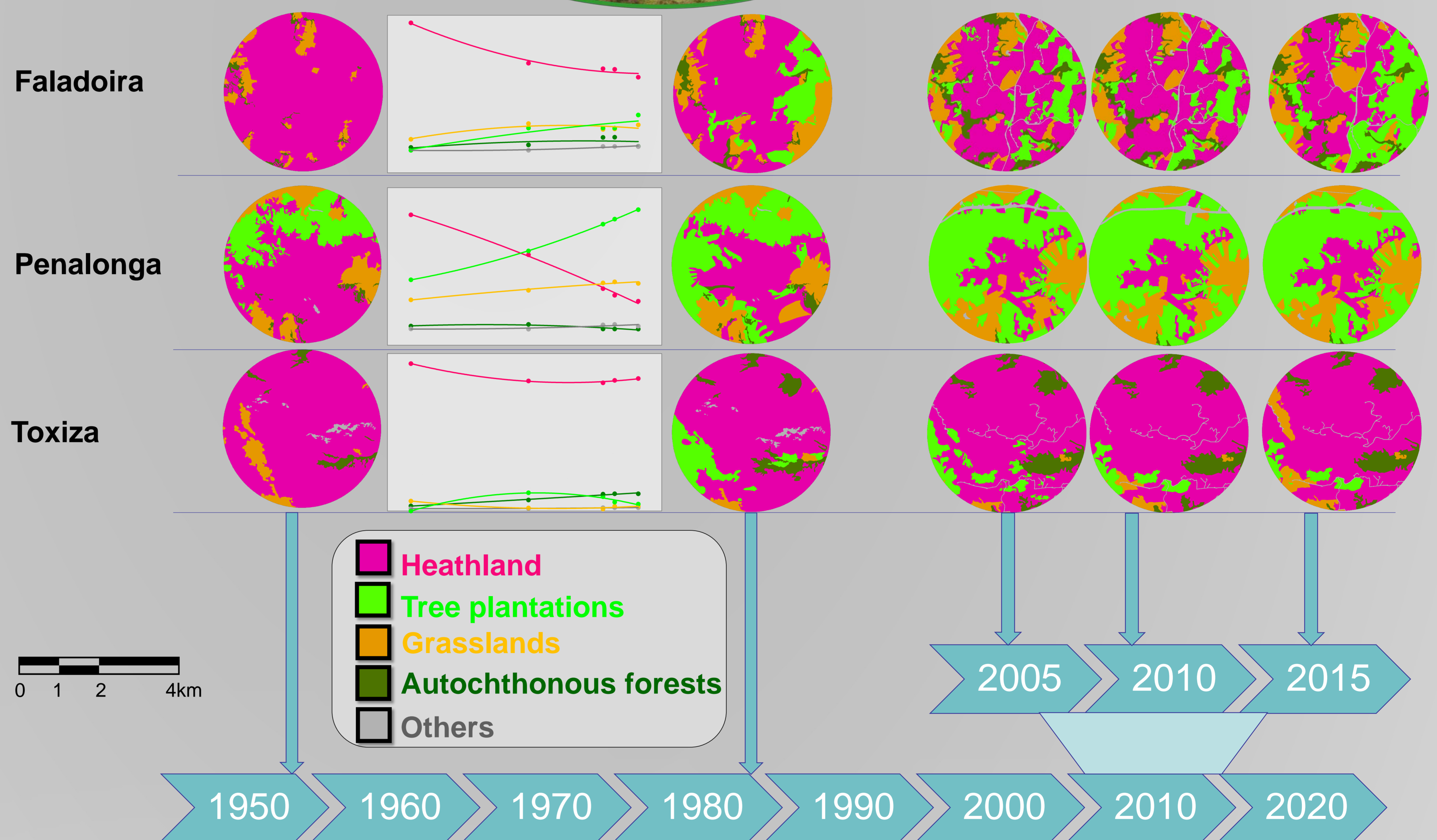
The general trend of land use changes related to heathland loss has extensively been recorded throughout Western Europe. Different spatial and temporal scales have shown a similar decline of dramatic losses of up to ninety per cent of the original heathland cover. Addressing this tendency implies the use of historical sources, which must be reliable and accurate. In Galicia, north-west Spain, large areas are still covered by different heathland types, but these are disappearing substituted by plantations and improved grasslands.



Material and methods

We have documented the transformation process of northern Galicia wet heaths of *Erica mackayana* using aerial photographs covering sixty years on eighteen heathland areas at two different spatial scales (one-kilometre and four-kilometres diameter circles), five time lags starting in the 1950s and two land-use classification systems (broad, with five classes (fig. 2), fine, with 15 classes). By means of interpreting orthophotographs and GIS tools (Geographic Information System), land use changes were quantified and fragmentation and cover of heathlands was analysed.

Fig 2.- Time line showing land use cover changes at 1956, 1986, 2004, 2008 and 2014 in three of the studied areas: Faladoira showing the average rate of heathland loss, Penalonga with one of the highest declines in heathland cover, and Toxiza, with one of the lowest.



Results

An important loss of heathland cover was observed, but we found a high variation between sites. Tree plantations has increased its cover the most, followed by deciduous autochthonous forests and improved grasslands. The decrease in heathland cover shows that the trend of the habitat decline in Europe is also taking place in Galicia. Therefore, it is necessary to establish measures for the conservation of these ecosystems related to the traditional uses, to counteract the negative effects of land use intensification.

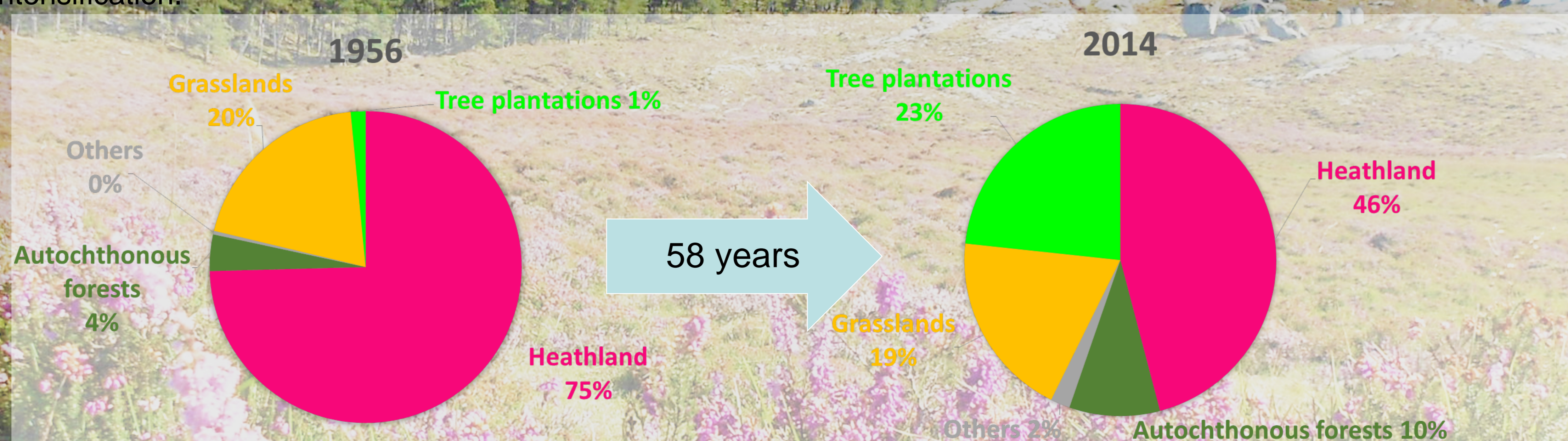


Fig 3.- Total results of land-use classification systems for the eighteen heathland areas during this period (1956-2014).

References

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