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## Strategy to Assess Genetic Diversity and Conserve Vietnamese Animal Genetic Resources Based on Molecular Parameter

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### Abstract

Vietnam is one of the countries, which is richest in biodiversity in the world. There are 50 local breeds known. They show specific adaptation to climate or disease and the local low input - low output production system. Despite their importance, their population sizes have been decreasing, some breeds are dangerous and threatened of extinction. The erosion of local breeds could be linked with the loss of valuable genetic variability and unique characteristics.

Moreover, identification of the local breeds in the country is mainly based on: their original areas, names called by local people and their phenotypic characteristics. According to definition for breed of FAO, there might be more breeds to be discovered in next years. Therefore, correct identifications of populations to conserve need to be an attention. Microsatellite was assessed to be very useful to assess genetic diversity and identify breeds for conservation.

Microsatellites markers which developed by the European Commission — funded project of Development of Strategy and Application of Molecular Tools to Assess Biodiversity in Chicken Genetic Resources (AVIANDIV), Institute of Animal Breeding and Biotechnology at Hohenheim University - Germany and the Project of Animal Biodiversity Assessment in Vietnam (BIODIVA) funded by France as well as Food and Agriculture Organization of United Nations (2004) - Secondary guidelines for development of national farm animal genetic resources management plans: measurement of domestic animal genetic diversity (MoDAD): Recommended microsatellite markers should be used to assess genetic diversity of chickens, pigs and ruminant, respectively.

The result obtained will be useful to identify breeds for efficient conservation measures and to monitor genetic variation within and between conservation flocks. It enables to contribute objective information on the global assessment and evaluation of the state of the world animal genetic resources.

**Keywords:** Animal genetic conservation, microsatellite, Vietnam