

Great Green Wall, Senegal

Sentinel-2 MSI acquired on 22 December 2015 at 11:25:02 UTC
Sentinel-2 MSI acquired on 26 December 2019 at 11:23:59 UTC

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[2D Layerstack](#)

Fig. 1 - Global view of the Great Green Wall

[2D view](#)



Fig. 2 - S2 (26.12.2019-22.12.2015) - Difference between 2015 and 2019 - Global view of the Great Green Wall in Senegal

[2D view](#) [2D animation](#)

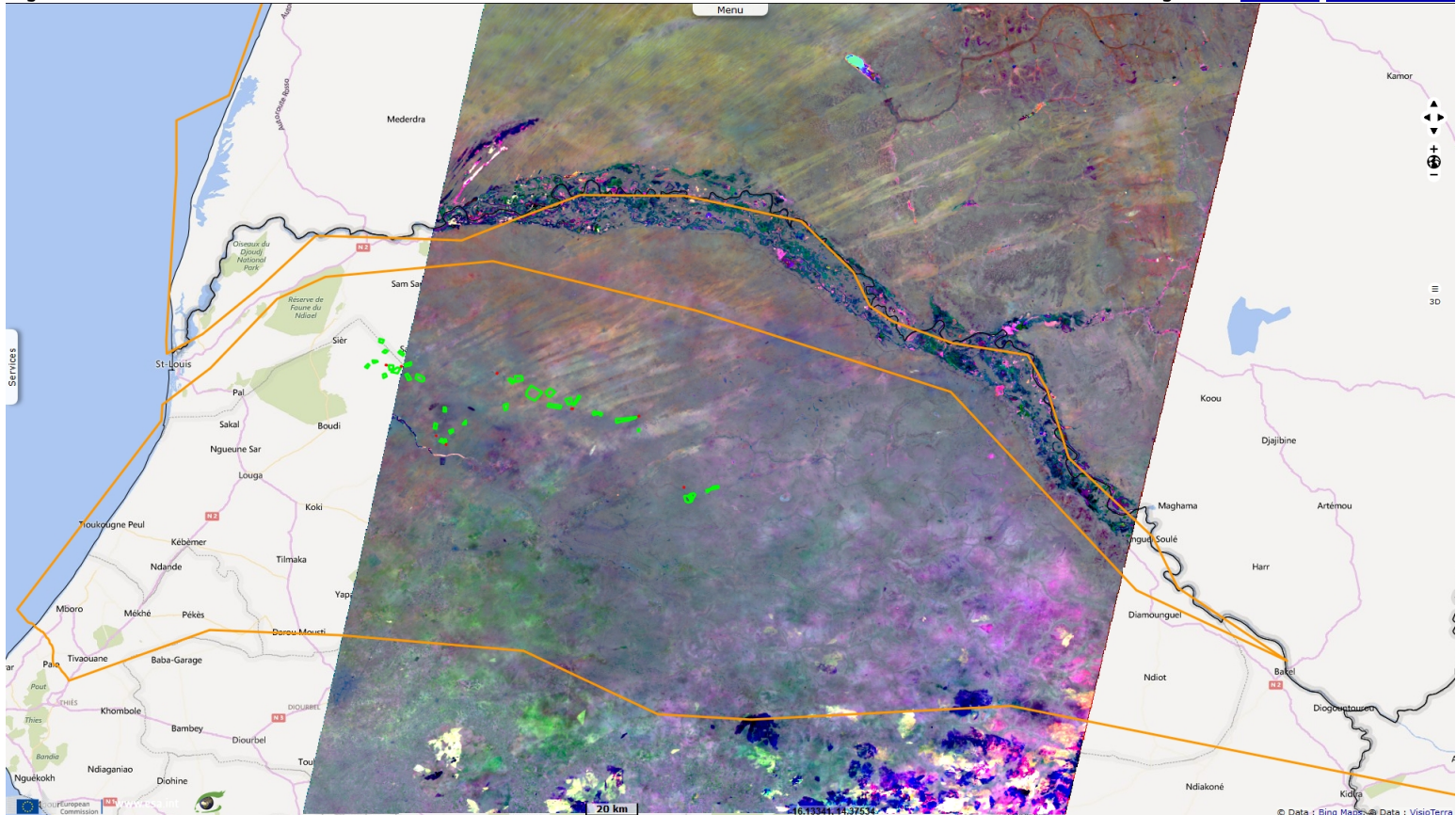


Fig. 3 - S2 (22.12.2015) - 11,8,2 colour composite - Global view of the Great Green Wall in Senegal in 2015

[2D view](#)

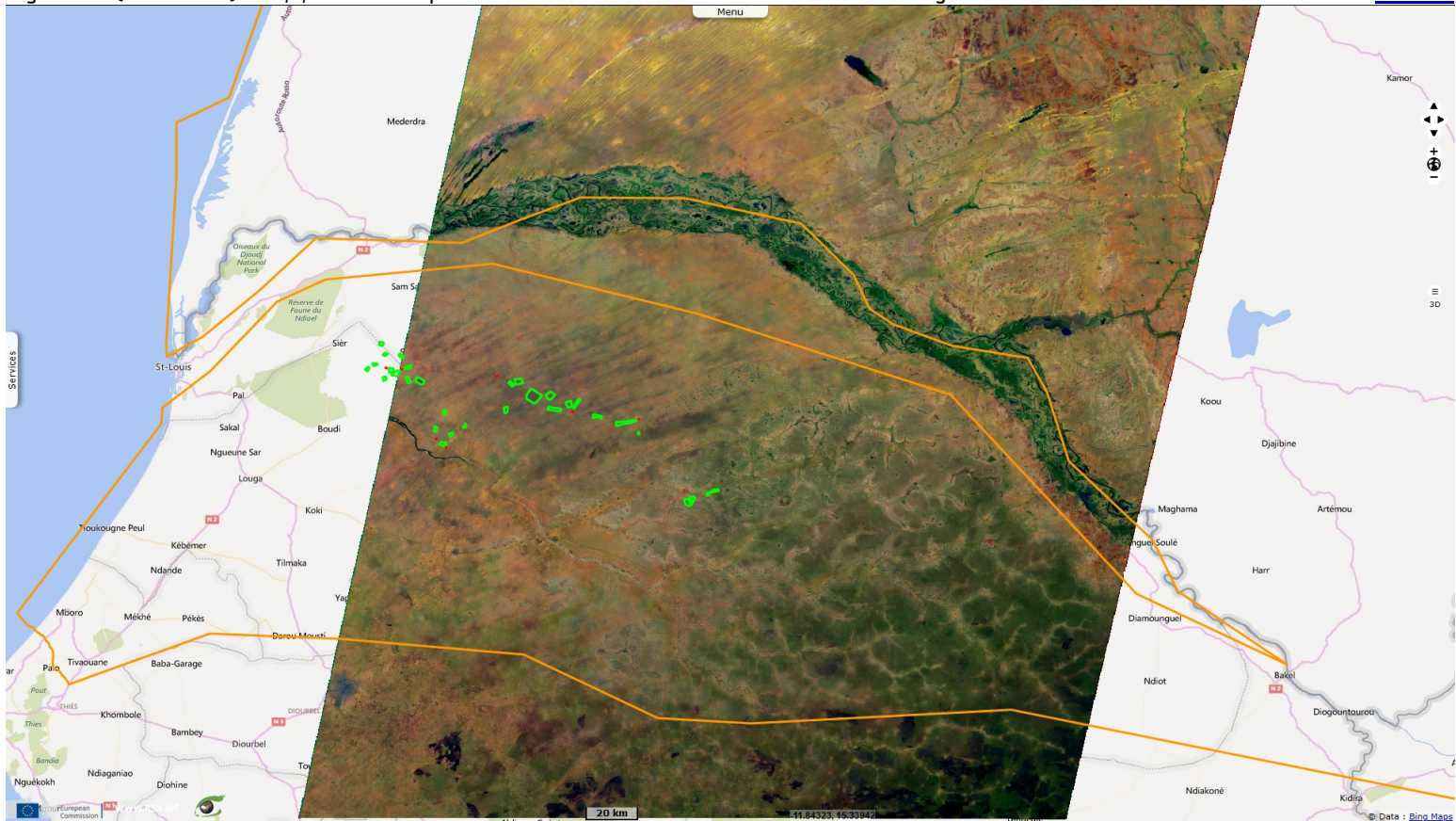
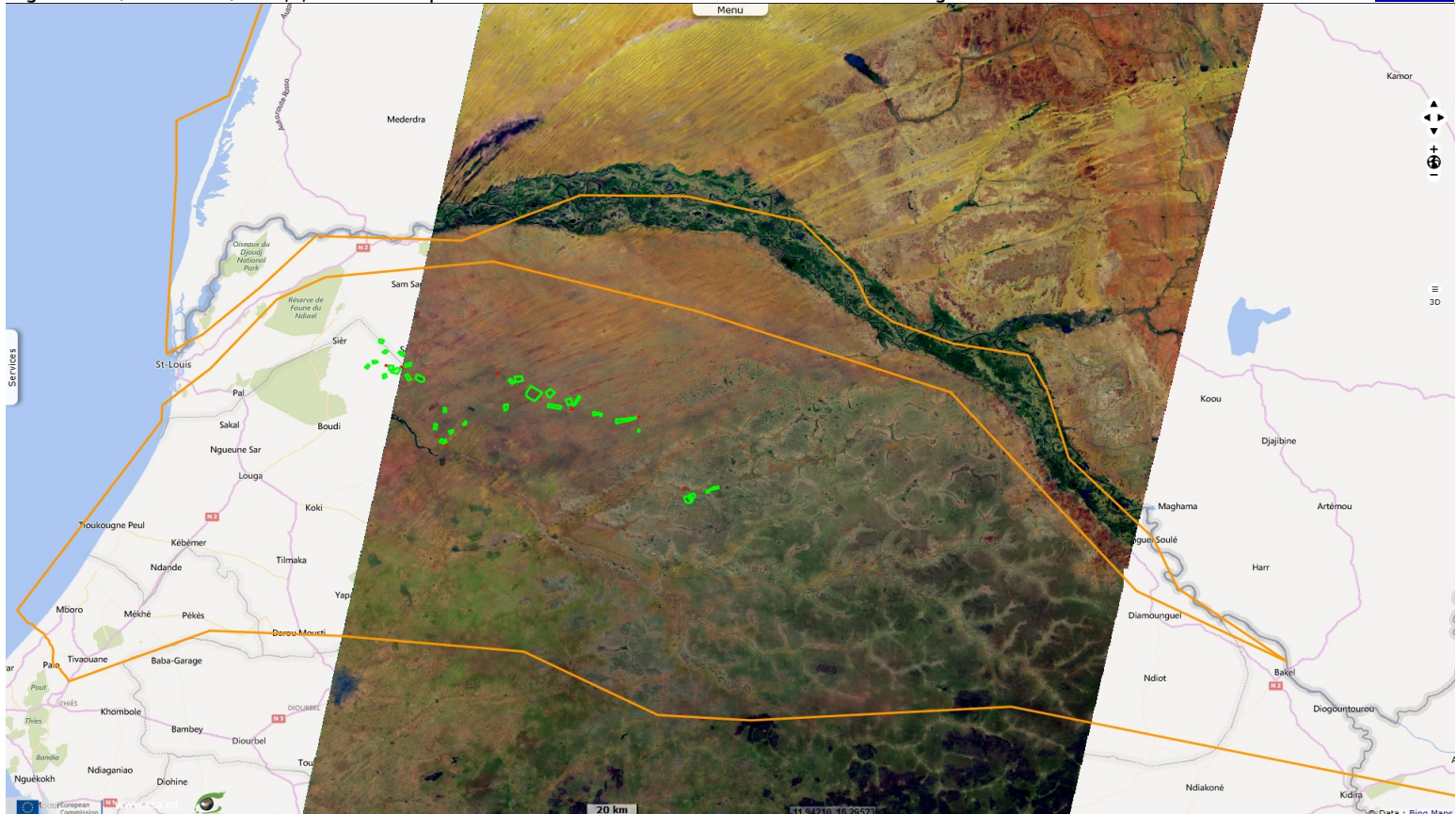


Fig. 4 - S2 (26.12.2019) - 11,8,2 colour composite - Global view of the Great Green Wall in Senegal in 2019

[2D view](#)



Following the successive droughts since the 1960s, deforestation and overgrazing, the African Union decided in 2007 to set up the Great Green Wall project. This is a project that aims to restore the Saharo-Sahelians ecosystems. Circumscribed mainly in an intervention zone between 100-400mm isohyets, the Great Green Wall project, extends over a length of about 7,800 km and crosses the continent from east to west passing through eleven countries (Burkina Faso, Djibouti, Eritrea, Ethiopia, Mali, Mauritania, Niger, Nigeria, Senegal, Sudan, and Chad). The regional coordination of the project is ensured by the APGMV - Source: [Pan-African Agency of the Great Green Wall](#).

This document shows the evolution of revegetation in Senegal in some restoration and reforestation sites named "parcelles de reboisement" and "jardins polyvalents" between 2015 and 2019 using Sentinel-2 images.

The "parcelle de reboisement" of Koyli-Alpha is located in the Koyli-Alpha community nature reserve in the municipality of Mboula. Revegetation produces an increase in chlorophyll activity to which band 8 (near infrared) of the MSI instrument of Sentinel-2 is sensitive. This band is assigned to the green channel in the color composition 11,8,2 (RGB). According to the [FAO](#), "In the Koyli Alpha community nature reserve, 4,500ha of degraded land has been restored and wildlife is being reintroduced". Twenty turtles have been introduced since June 2018 and the reintroduction of three species of gazelles and antelopes was planned during 2019 (Source : [UN Senegal](#)).

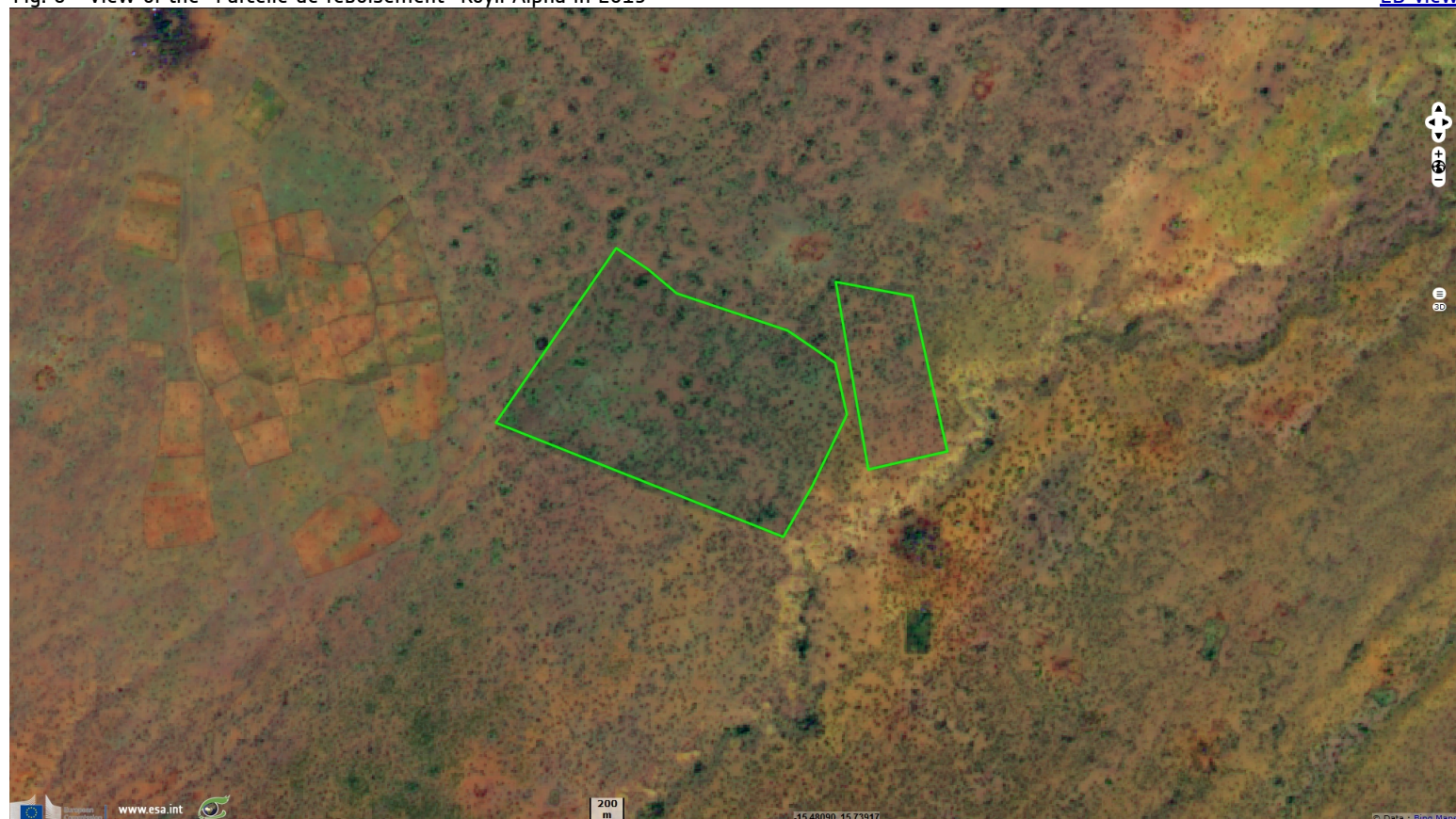
Fig. 5 - View of the "Parcelle de reboisement" Koyli-Alpha in 2015

[2D view](#) [2D animation](#)



Fig. 6 - View of the "Parcelle de reboisement" Koyli-Alpha in 2019

[2D view](#)



"Les jardins polyvalents" are much smaller entities than "parcelles de reboisement". They are often located near towns or villages or hamlets. The "jardins polyvalents" are restored on a larger scale (unitary rule of 100 m) while the "parcelles de reboisement" are restored on a smaller scale (unitary rule of 200 m). Thus, in a "jardin polyvalent", fruit or nutritious trees (mango trees, guava trees, orange trees, moringa, etc.) are always associated with seasonal market gardening- Source: Marcelin SANOU, Pan-African Agency of the Great Green Wall.

Fig. 7 - View of the "Jardin polyvalent" Koyli-Alpha in 2015

[2D view](#) [2D animation](#)



Fig. 8 - View of the "Jardin polyvalent" Koyli-Alpha in 2019

[2D view](#)



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