



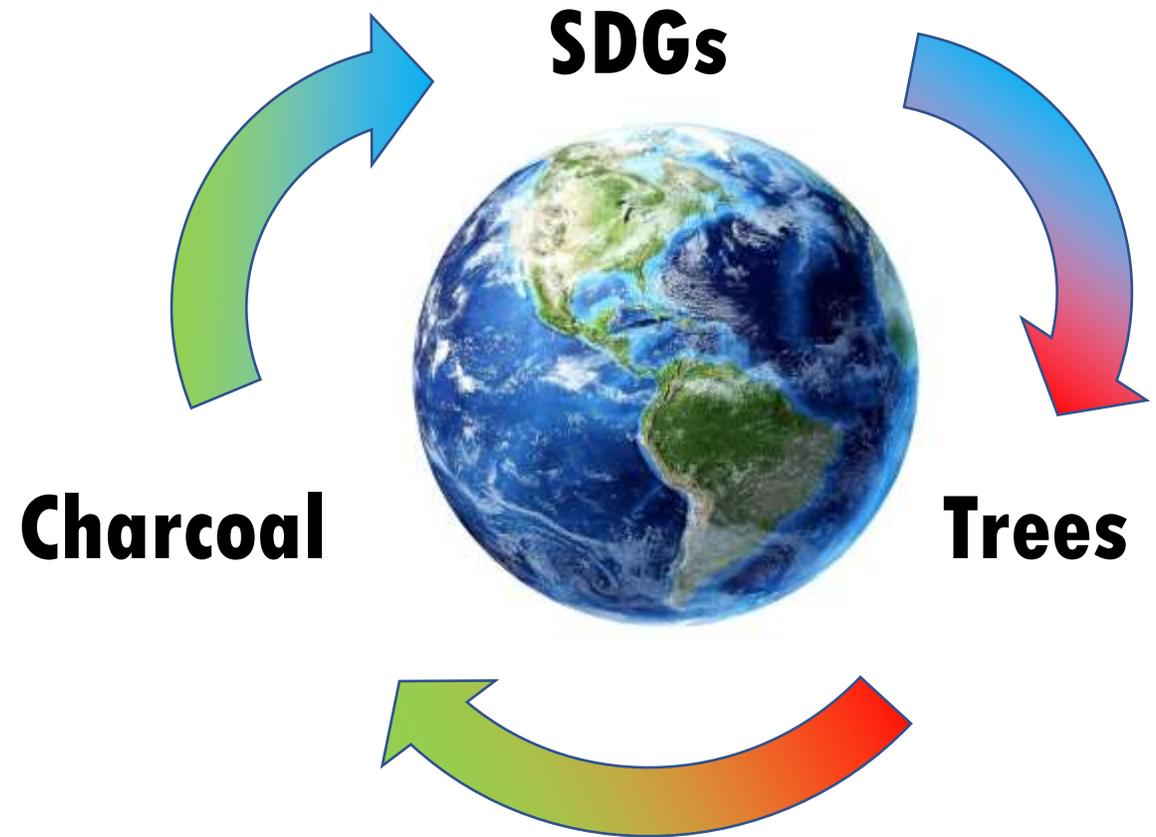
Charcoal Trees and SDGs

Tim Buckley

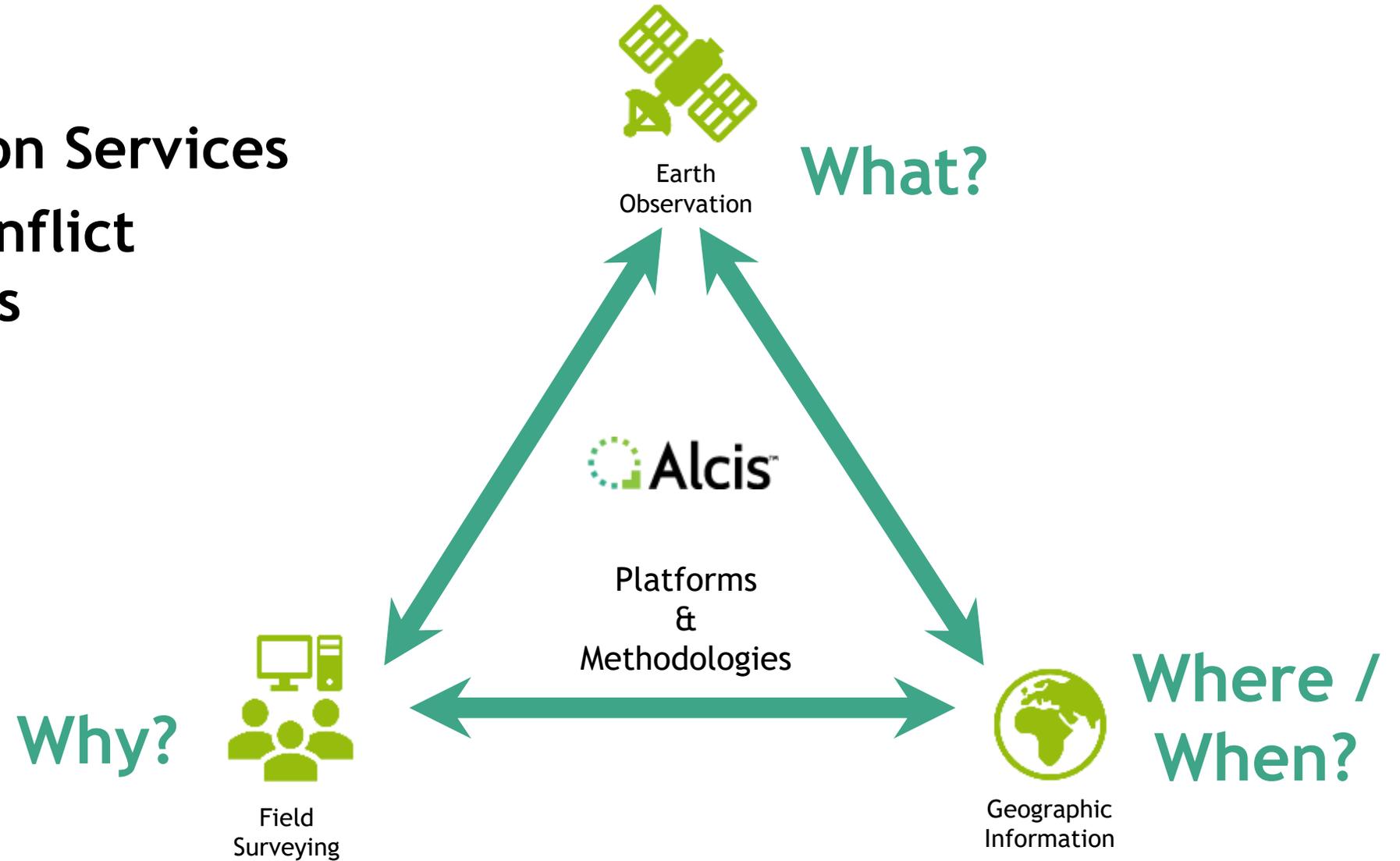
Chief Operating Officer - Alcis



- Alcis
- Satellite Imagery and Technology
 - SDGs
 - Trees
 - Charcoal
 - Sustainability



- Geo Information Services
- Fragile and Conflict Affected States



- **Monitoring SDG Indicators**
 - Opportunities for Remote Sensing
 - 9.1.1 - 2km to all weather road
 - 7.1.1 - Access to electricity
 - 7.1.2 - Clean fuels and technologies



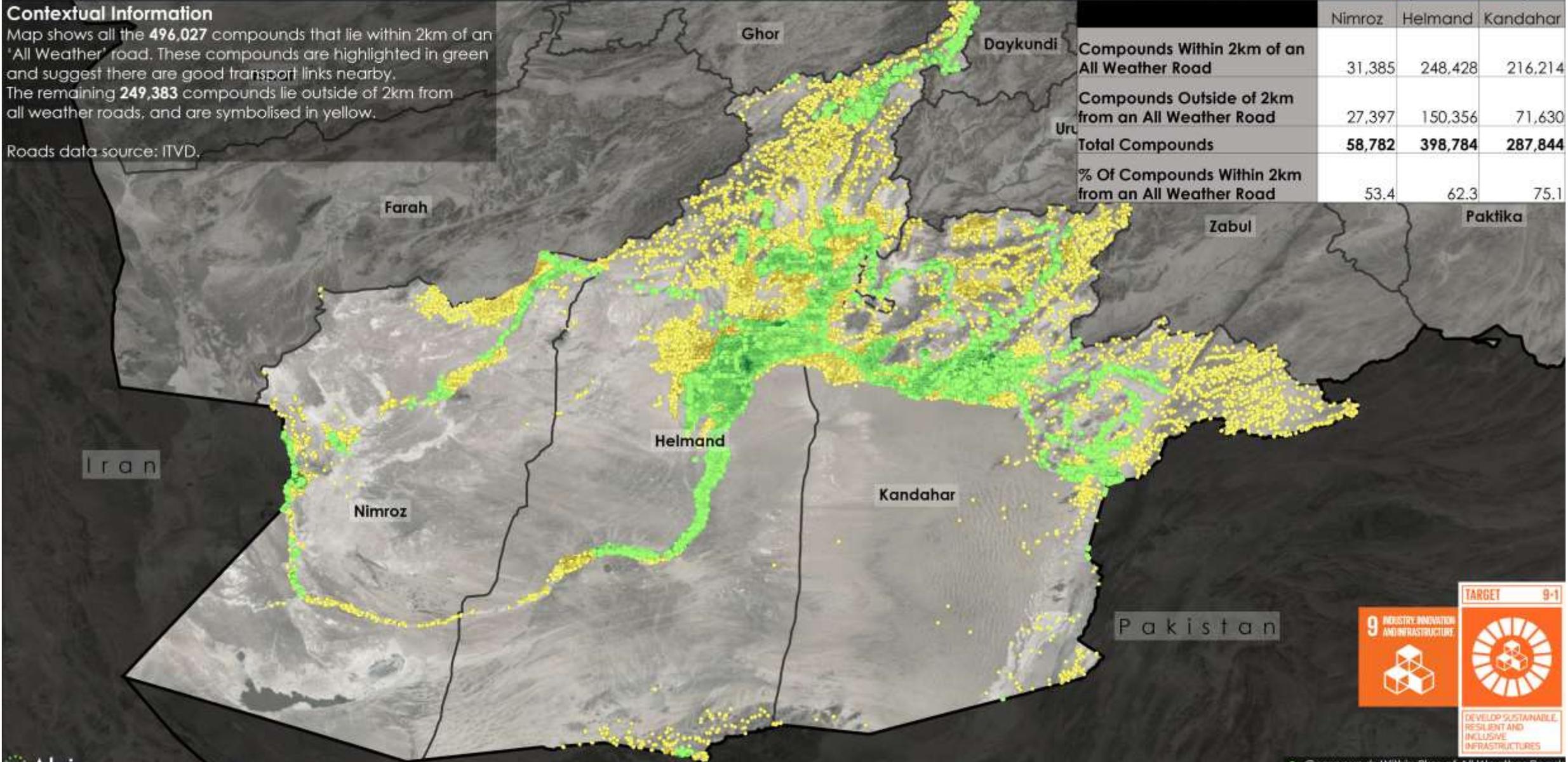
Compounds Within 2km of All Weather Roads

Southwest Afghanistan



Contextual Information
 Map shows all the **496,027** compounds that lie within 2km of an 'All Weather' road. These compounds are highlighted in green and suggest there are good transport links nearby. The remaining **249,383** compounds lie outside of 2km from all weather roads, and are symbolised in yellow.
 Roads data source: ITVD.

	Nimroz	Helmand	Kandahar
Compounds Within 2km of an All Weather Road	31,385	248,428	216,214
Compounds Outside of 2km from an All Weather Road	27,397	150,356	71,630
Total Compounds	58,782	398,784	287,844
% Of Compounds Within 2km from an All Weather Road	53.4	62.3	75.1



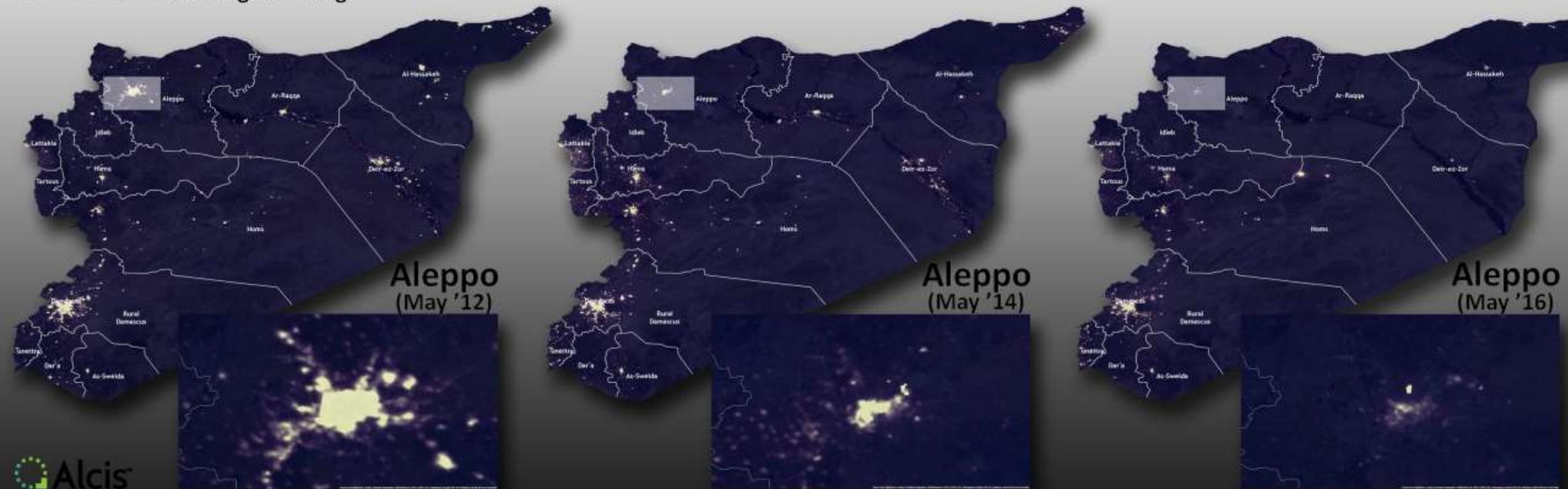
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

TARGET 9-1

DEVELOP SUSTAINABLE, RESILIENT AND INCLUSIVE INFRASTRUCTURES

7.1.1 Access to Electricity

SYRIA VIIRS Lights at Night



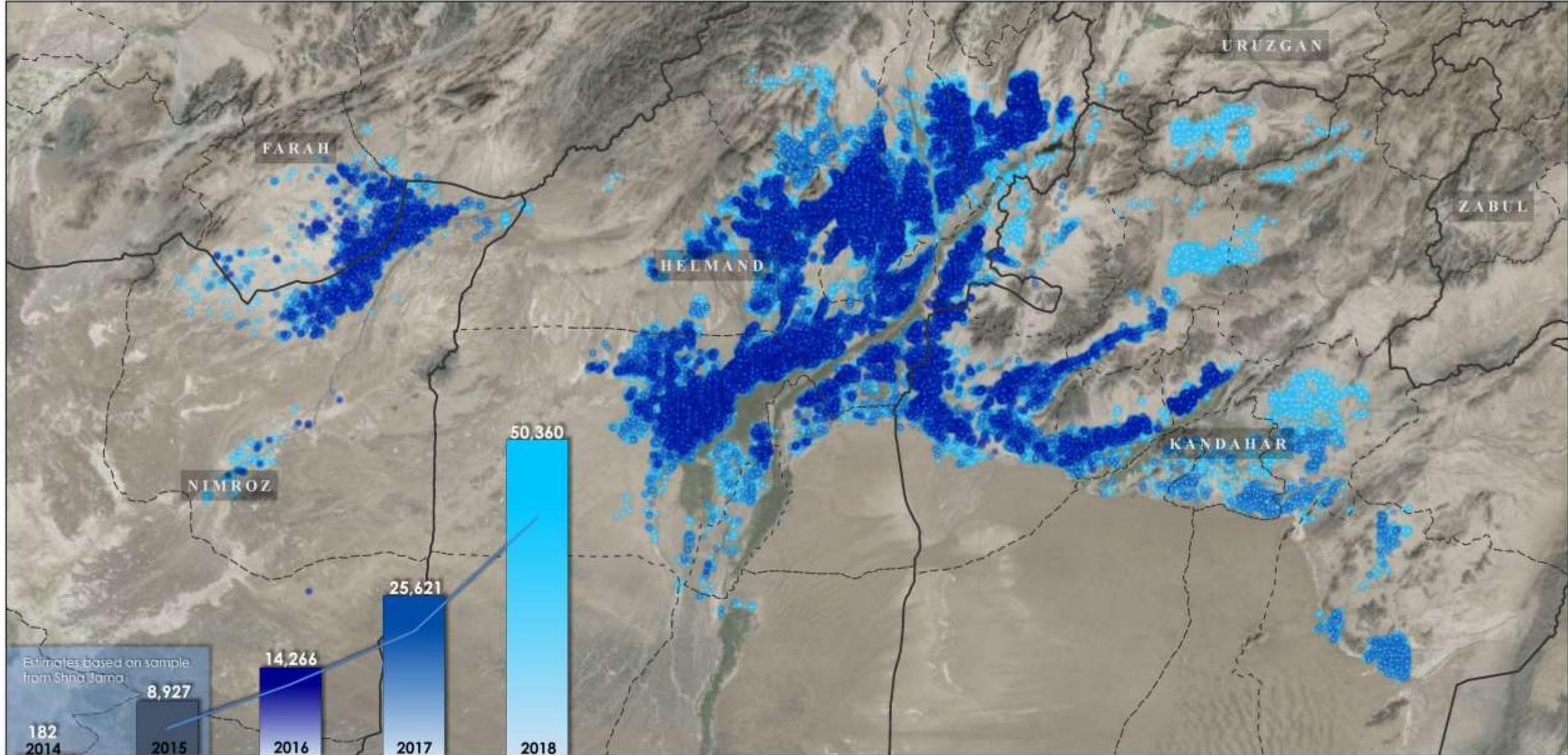
7.1.2 Clean Fuels



Adoption of Solar Power in Afghanistan

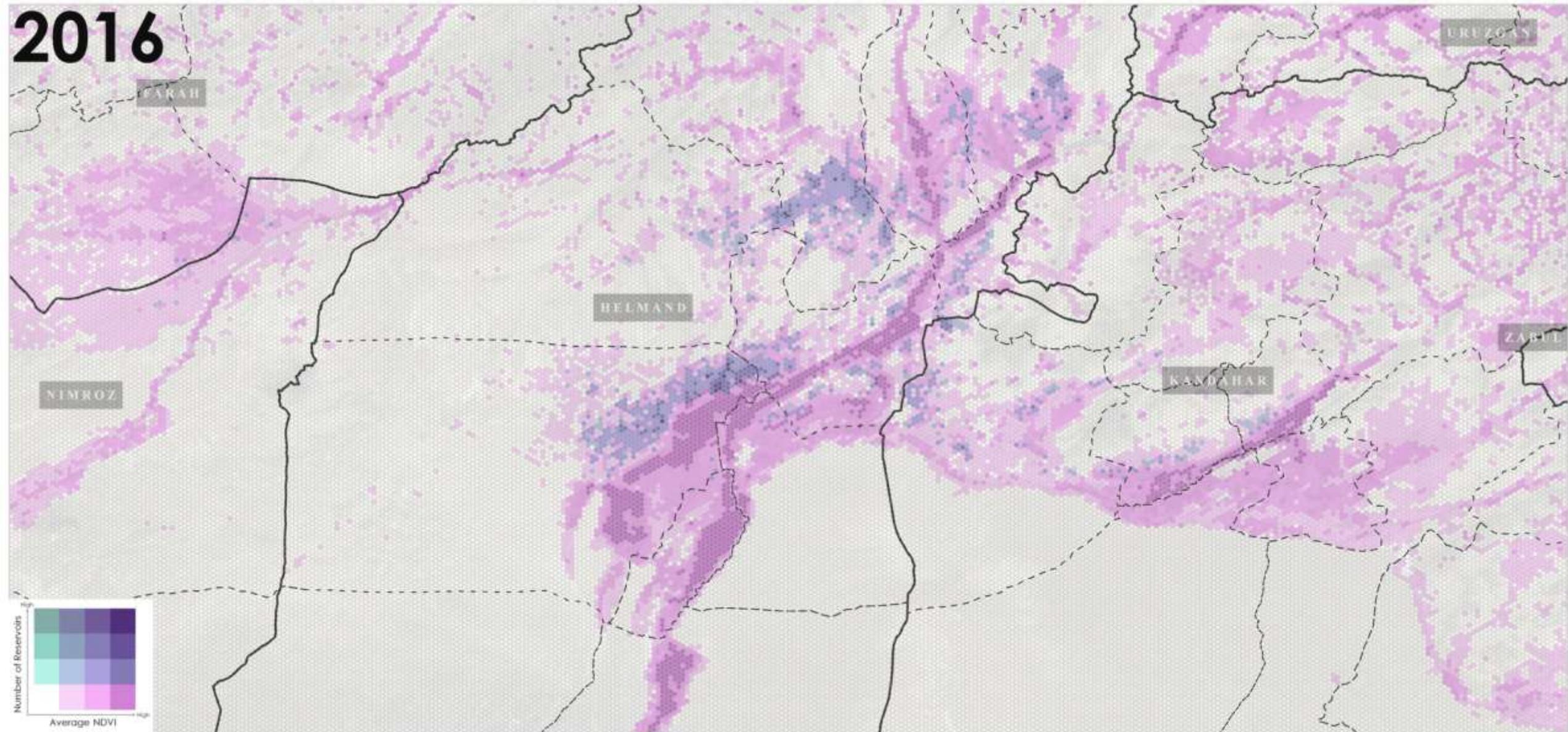


Reservoirs in South West Afghanistan 2016 - 2018



Estimates based on sample from Shna Jama

2016



15 LIFE
ON LAND

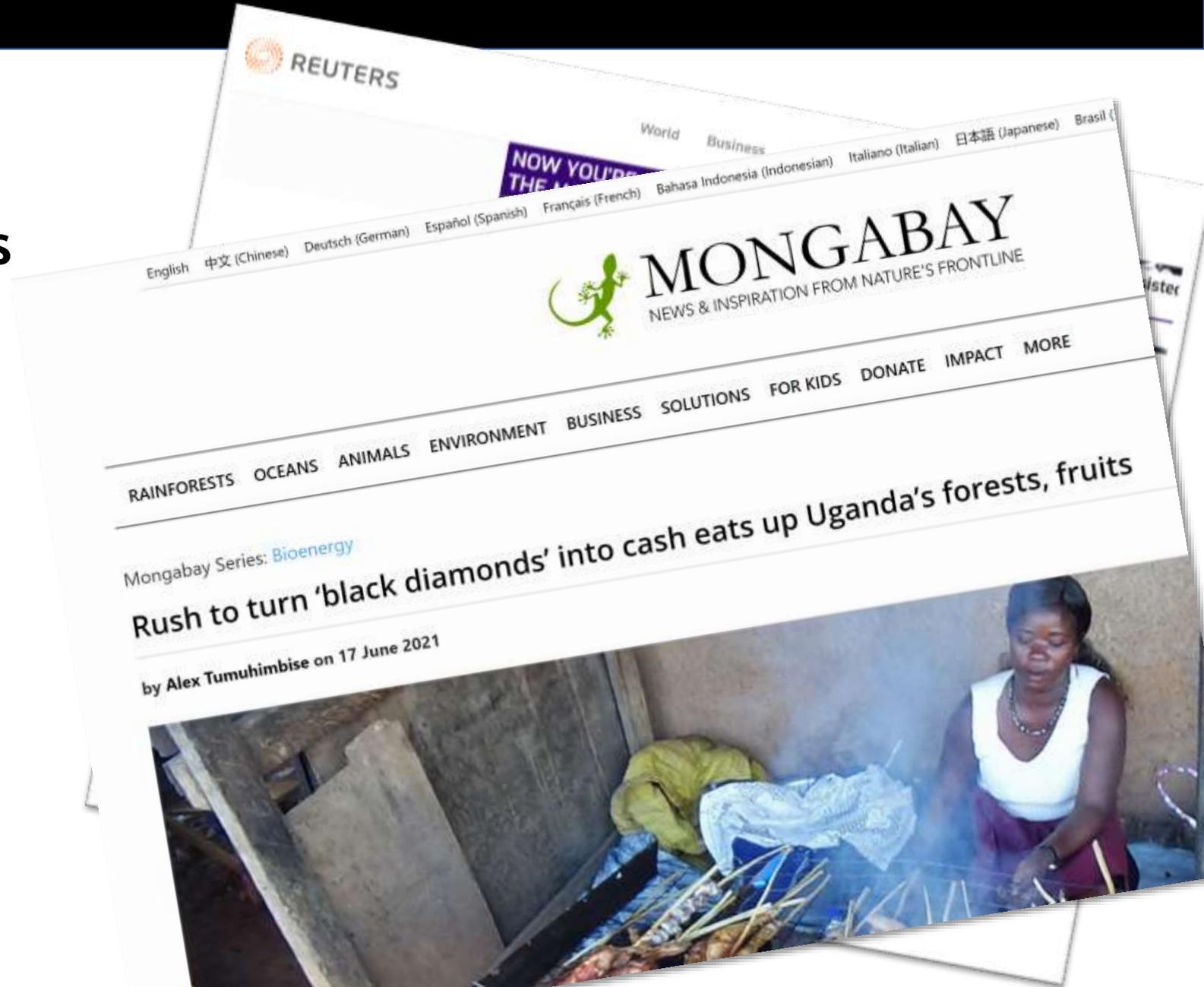


Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- **Natural disaster risk reduction**
- **Carbon Sequestration**
- **Balance the atmosphere**
- **Protect watersheds**

Charcoal in Uganda

- Large scale problem
- Multiple related issues
 - Environmental
 - Economic
 - Social
 - Infrastructure
 - Sustainability
 - Urban/Rural disparity

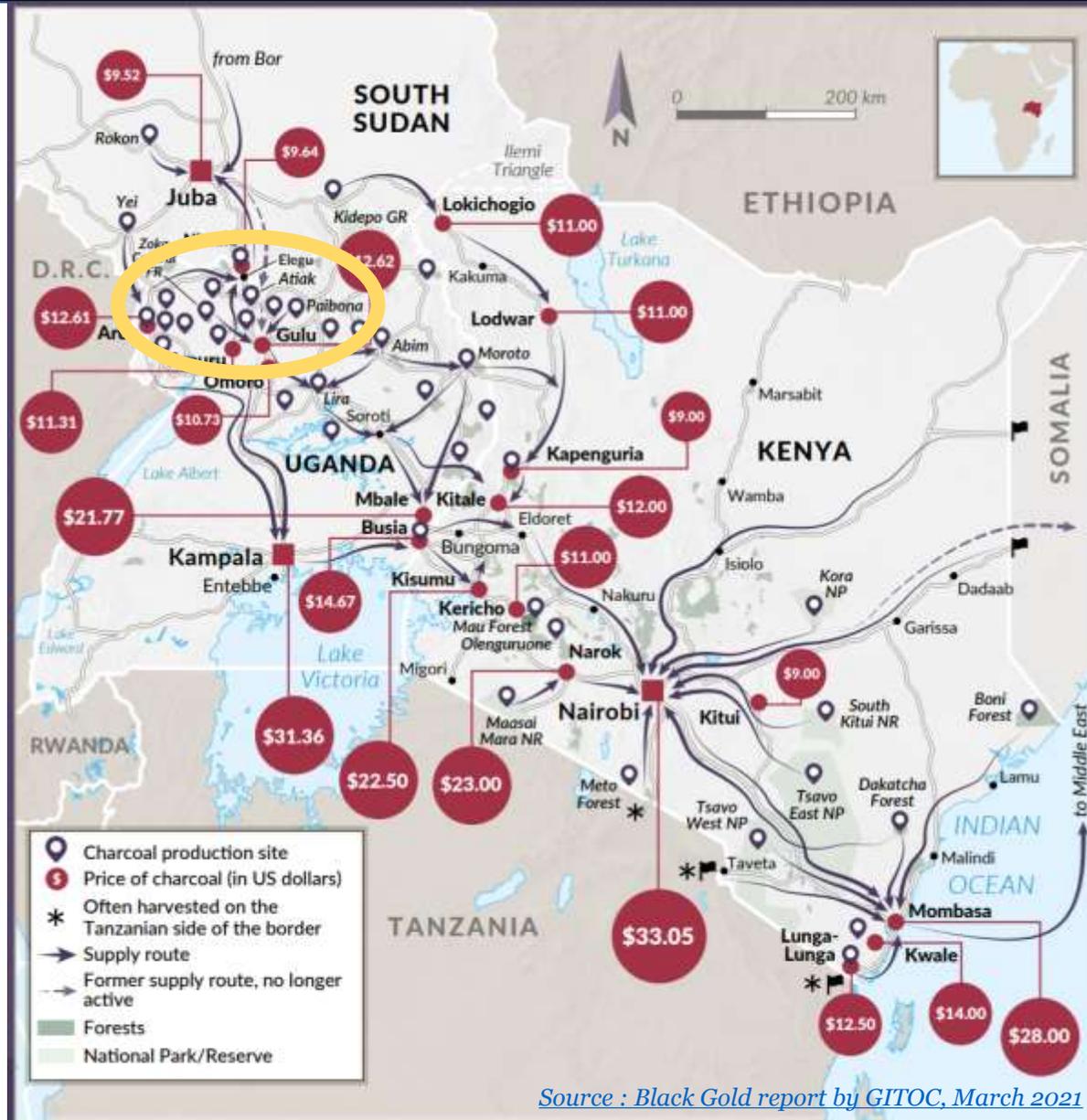


Sustainable Consumption?





Traceability



Source : Black Gold report by GITOC, March 2021

One tree, many functions

16 PEACE, JUSTICE AND STRONG INSTITUTIONS



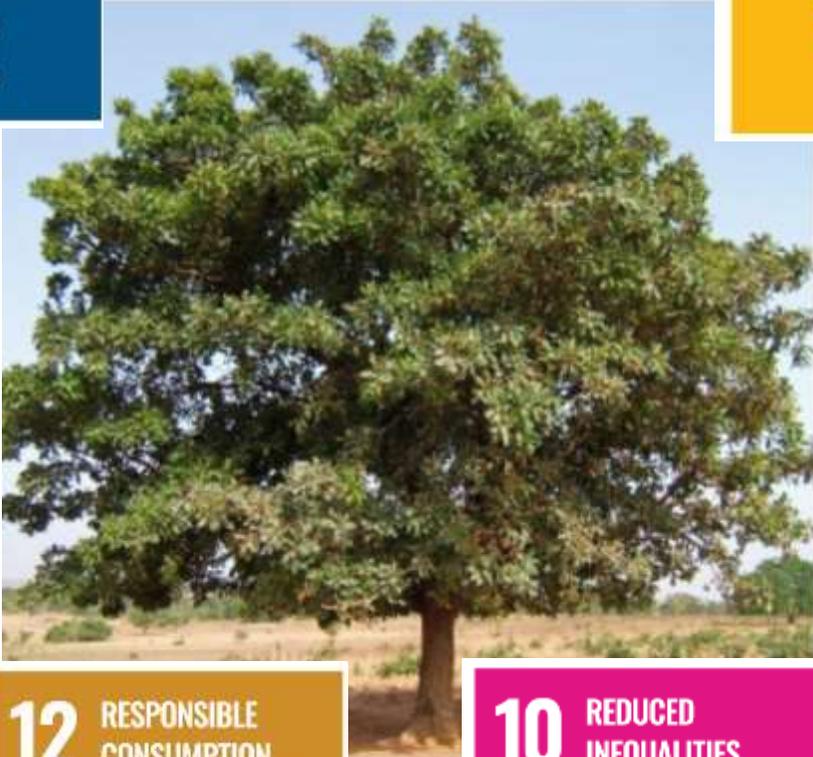
1 NO POVERTY



7 AFFORDABLE AND CLEAN ENERGY



15 LIFE ON LAND



8 DECENT WORK AND ECONOMIC GROWTH



13 CLIMATE ACTION



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



10 REDUCED INEQUALITIES



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



Use Geo & EO to shine a light

- Regulation?
- Enforcement?
- Clean energy?
- ???



Questions

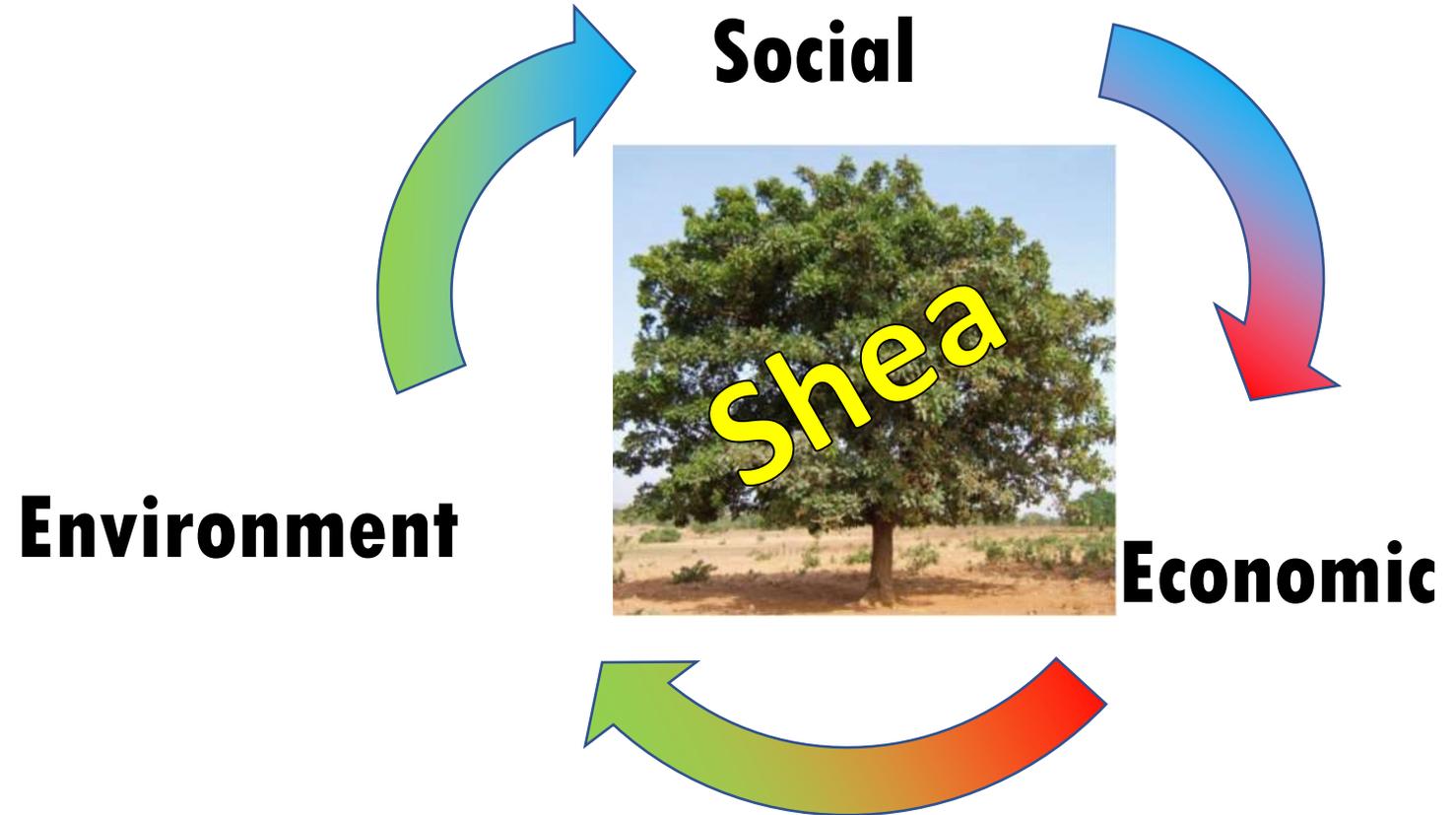


Thank you

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- **Text level 1**
 - Text level 2
 - **Text level 3**
 - *Text level 4*

- **Text level 1**
 - Text level 2
 - **Text level 3**
 - *Text level 4*







1 NO POVERTY



End poverty in all its forms everywhere



13 CLIMATE ACTION



Take urgent action to combat climate change and its impacts

Impact of 2018 Drought - 1st Crop Cycle Badghis Province, Murghab Catchment



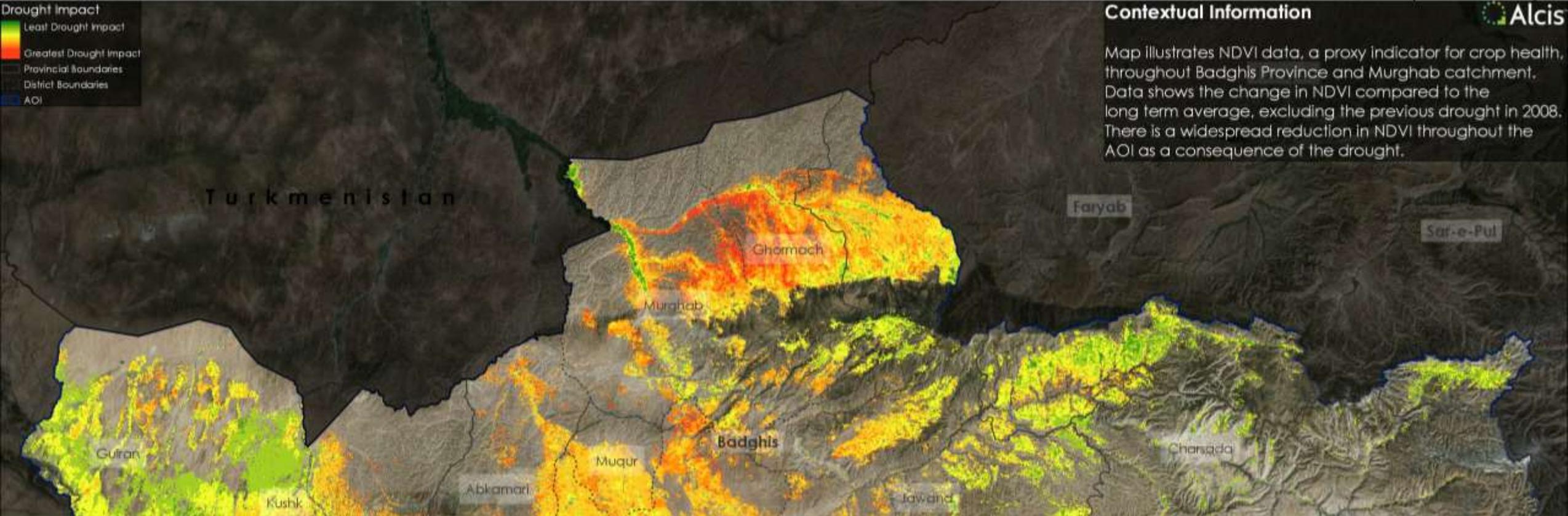
Drought Impact

- Least Drought Impact
- Greatest Drought Impact
- Provincial Boundaries
- District Boundaries
- AOI

Contextual Information



Map illustrates NDVI data, a proxy indicator for crop health, throughout Badghis Province and Murghab catchment. Data shows the change in NDVI compared to the long term average, excluding the previous drought in 2008. There is a widespread reduction in NDVI throughout the AOI as a consequence of the drought.



15 LIFE ON LAND

15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world



Goal 7: Ensure access to affordable, reliable, sustainable and modern energy

<https://www.un.org/sustainabledevelopment/energy/>

<p>7.1 By 2030, ensure universal access to affordable, reliable and modern energy services</p>	<p>7.1.1 Proportion of population with access to electricity</p> <p>7.1.2 Proportion of population with primary reliance on clean fuels and technology</p>
<p>7.2 By 2030, increase substantially the share of renewable energy in the global energy mix</p>	<p>7.2.1 Renewable energy share in the total final energy consumption</p>
<p>7.3 By 2030, double the global rate of improvement in energy efficiency</p>	<p>7.3.1 Energy intensity measured in terms of primary energy and GDP</p>
<p>7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology</p>	<p>7.a.1 International financial flows to developing countries in support of clean energy research and development and renewable energy production, including in hybrid systems</p>
<p>7.b By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States and landlocked developing countries, in accordance with their respective programmes of support</p>	<p>7.b.1 Investments in energy efficiency as a proportion of GDP and the amount of foreign direct investment in financial transfer for infrastructure and technology to sustainable development services</p>

- **Monitoring Indicators**
- 15.1.1 Forest as a proportion of land area
- 15.2.1 Sustainable forest management

Image



- Monitor

- Te



- DESCRIPTION
- Sustainable Development Goal 15 aims to “protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”.
- Forests have a significant role in reducing the risk of natural disasters, including floods, droughts, landslides and other extreme events. At global level, forests mitigate climate change through carbon sequestration, contribute to the balance of oxygen, carbon dioxide and humidity in the air and protect watersheds, which supply 75% of freshwater worldwide.
- Investing in forests and forestry represent an investment in people and their livelihoods, especially the rural poor, youth and women. Around 1.6 billion people - including more than 2,000 indigenous cultures - depend on forests for their livelihood.
- Forests are the most biologically-diverse ecosystems on land, home to more than 80% of the terrestrial species of animals, plants and insects. They also provide shelter, jobs and security for forest-dependent communities.
- Therefore, the future of forests and forestry in sustainable development at all levels was at the core of the XIV World Forestry, hosted in Durban from 7 to 11 September 2015. The Durban Declaration called for new partnerships among forest, agriculture, finance, energy, water and other sectors, as well the engagement with indigenous people and local community.
- The importance of investing in world’s forests and of taking “political commitment at the highest levels, smart policies, effective law enforcement, innovative partnerships and funding” was also recalled by the UN Secretary-General Mr Ban Ki-moon in his Message on the occasion of the 2015 International Day of Forests.
- Both the International Day of Forests, launched in 2013 and the International Year of Forest proclaimed for 2011 aimed at raising awareness on the importance of all types of forests and of trees outside forests.
- Prior to the 2030 Agenda for Sustainable Development, the outcome document of the Rio+20 Conference, the Future We Want, in its paragraphs 193- 196 stress the importance of improving the livelihoods of people and communities by creating the conditions required to sustainably manage forests. It also recognizes the role of the UN Forum on Forests in addressing forest-related issues in a holistic and integrated manner, and in promoting international policy coordination and cooperation in order to achieve forest management. Paragraph 196 calls for the mainstreaming of sustainable forest management and practises into economic policy and decision-making.
- Chapter 11 of Agenda 21 is entitled ‘Combating Deforestation’ and is devoted to sustain the multiple roles and functions of all types of forests, forest lands and woodlands.
- On one side, the Agenda highlights the major weaknesses in the policies, methods and mechanisms adopted to support trees, forests and forest lands and the multiple ecological, economic, social and cultural roles.
- Therefore, on the other side, it identifies, among its objectives, the strengthening of forest-related national institutions, the enhancement of the scope and effectiveness of activities related to the management, conservation and sustainable development of forests, and the sustainable utilization and production of forests’ goods and services in both the developed and the developing countries.
- The Agenda also mentions the importance to improve human, technical and professional skills, as well as expertise and capabilities to effectively formulate and implement policies, plans, programmes, research and projects on management, conservation and sustainable development of all types of forests and forest-based resources, and forest lands inclusive,

