



Value Chain Analysis – Speyside Malt Whisky

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Based on research with Rachel Creaney, Dave Miller, Keith Matthews, Sharon Flanigan, Doug Wardell-Johnson, Gianna Gandossi, Aisha Chabdu, and Jon Hopkins (James Hutton Institute)

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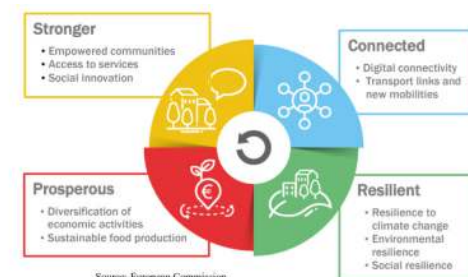
Value Chains



- Porter (1985) process of **firms** gaining competitive advantage along chain



- Agritura VC4D (2017) contribution of **national commodities** to growth/jobs
- H2020 MOVING contribution to **mountain** rural development
- SC = steps to ensure high quality product to customer



EC Long Term Vision for Rural Areas

WHAT'S IN A DRAM?

You will need...

- WATER
- BARLEY
- OAK TREES
- DRAMATIC LANDSCAPES

Making
£5 billion
per year?

Preparation in advance

FORM THE PEATLAND

Soak moss and other peat bogs, then
in damp conditions and water for
for 10-20 years. Healthy peatlands
and forests store water and provide
flood protection, as well as being an
ecosystem store for carbon.

Method

1. FILTER THE WATER

Topography does control water and
the flow of water can be
throughout the process. If you
want to speed up the process, the
value of natural capital, higher
waterlogging may be almost here.

2. GROW THE BARLEY

Spread barley grains over well
manured fertile soil and have it a
colder climate. If the soil is too wet
and cold in the first, try inexpensive
nutrient fertilizers. The planting process
is to know about water flow to find the
whole thing. In the, natural capital is
with small birds and insects.

3. RE-USE THE OAK

To add interesting features, use oak
barrels already used in other projects.
In the 1800s, it was a common
practice to use oak barrels for
natural capital, as oak barrels are
in 1800s, a strong link to water.

4. PRESERVE THE LANDSCAPES

Preserve dramatic natural landscapes
and build defining spaces to create
the deep connection with nature and
promote a healthy Scottish identity.
Wild landscapes can also help to
provide income and inspiration
for drink and tourism.



WHISKY IS USUALLY
AGED 10,000 YEARS

It's not just the whisky industry that relies
on natural capital. **We all do.**

Join the Scottish Forum on Natural Capital
and learn how the whole economy relies
on the health of our natural environment.

naturalcapitalscotland.com
@ScottNatCap #ScottNatCap

Scottish Forum on
Natural Capital

Co-organising partner

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Value Chains & Natural Capital



Speyside Malt Whisky - reliance on natural capital & other assets

Current configuration of land cover, land use and land management

Whisky requires spring & SW for cooling



Food and Agriculture
Organization of the
United Nations

CREW CENTRE OF
EXPERTISE
FOR WATERS

Private Water Supplies
and Climate Change

The likely impacts of
climate change (amount,
frequency and distribution
of precipitation), and the
resilience of private water
supplies



VALUING
NATURE

Future land management
business models

Supporting businesses dependent on the environment
to invest in restoring and enhancing natural capital

Anja Liski
Twitter @AHLiski

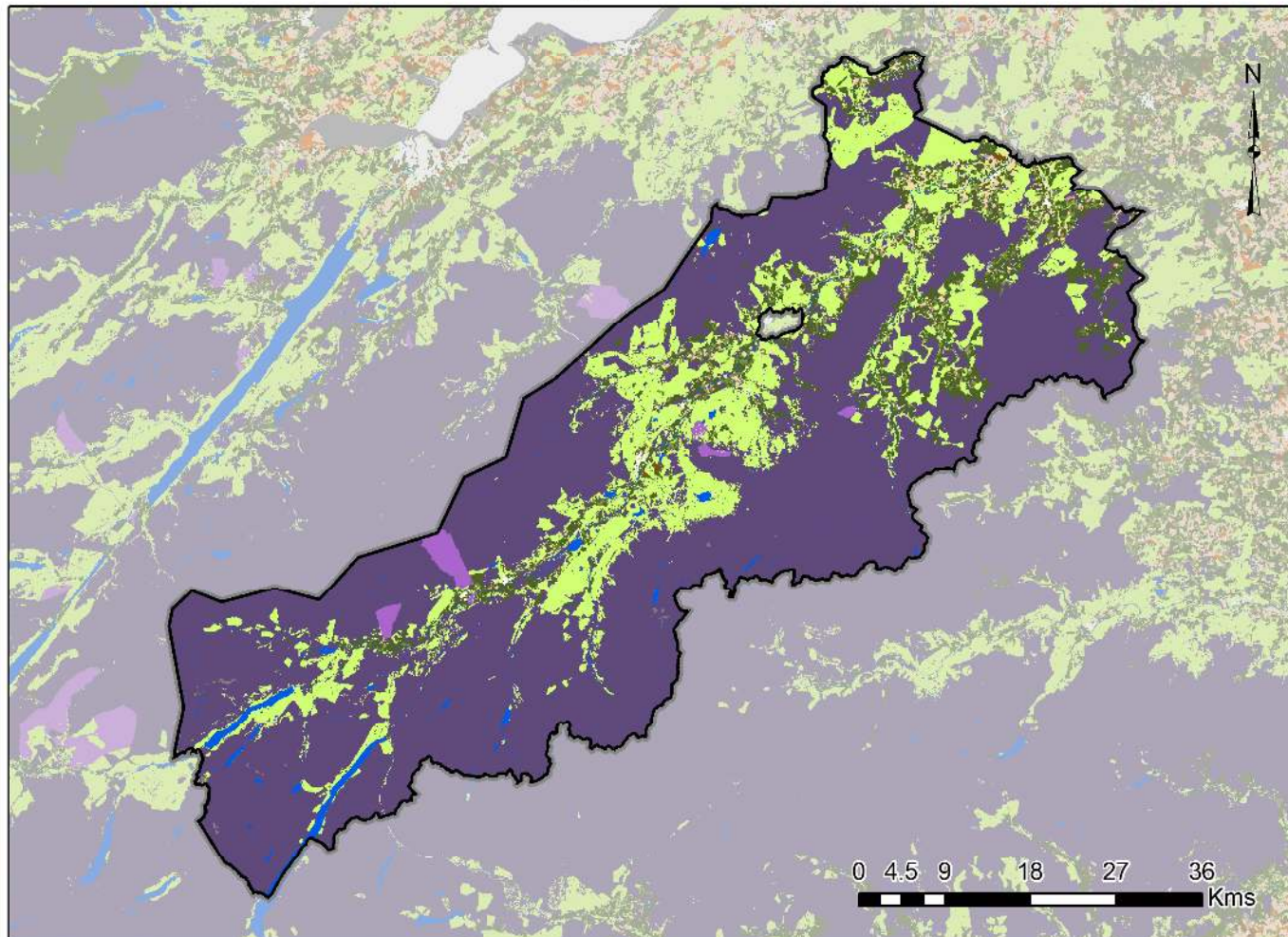
Scottish Forum on
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Composite Land Use And Land Cover Map



Legend

- Reference Landscape
- Land Use/Cover**
- Environmental Management
- Woodlands and Forestry
- Energy Crops
- Rough Grazing
- Common Grazing
- Grass Over 5 Years
- Grass Under 5 Years
- Forage Crops
- Other Cropping
- Spring Cereal
- Winter Cereal
- Horticulture
- Other Land
- Inland Water

MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH

Approx 72 Estates
~600 agricultural holdings
~350 businesses

Notes:
Composite land use and land cover map 2018.

This map combines data from four different sources to generate a composite map of land use or land cover. Where possible land use information has been drawn from the SG IACS field register. In the absence of IACS data, reference has been made to other ancillary datasets. In order of preference the sources are:

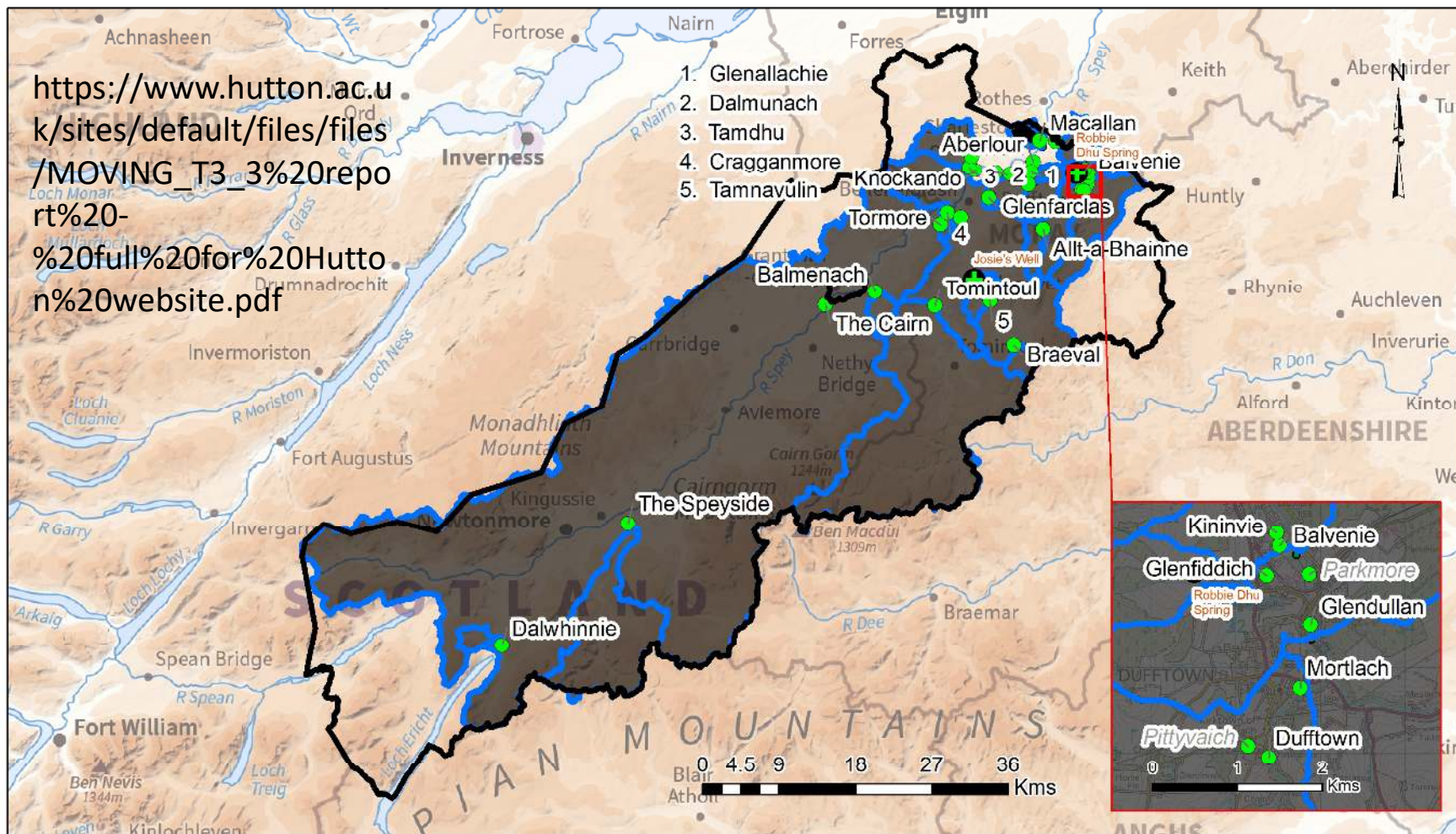
- 1) IACS field register
- 2) National Forest Inventory of Scotland
- 3) Ordnance Survey MasterMap Topography Layer
- 4) UK Land Cover Map 2007

Map produced by Dave Miller, The James Hutton Institute. © Crown copyright and database right 2021. All rights reserved. Ordnance Survey Licence Number 100019294.



Distilleries and their contributing catchments within the mountain reference landscape

https://www.hutton.ac.uk/sites/default/files/files/MOVING_T3_3%20report%20full%20for%20Hutton%20website.pdf



Notes: Distilleries and their contributing catchments within the mountain reference landscape
Extent of mountain reference landscape as defined in the MOVING project including locations of distilleries. Individual catchment boundaries have been derived for nearly all the distilleries in the catchment where water sources are known. Detail taken from a number of sources including <http://www.wormtub.com/distilleries.php#speyside>.

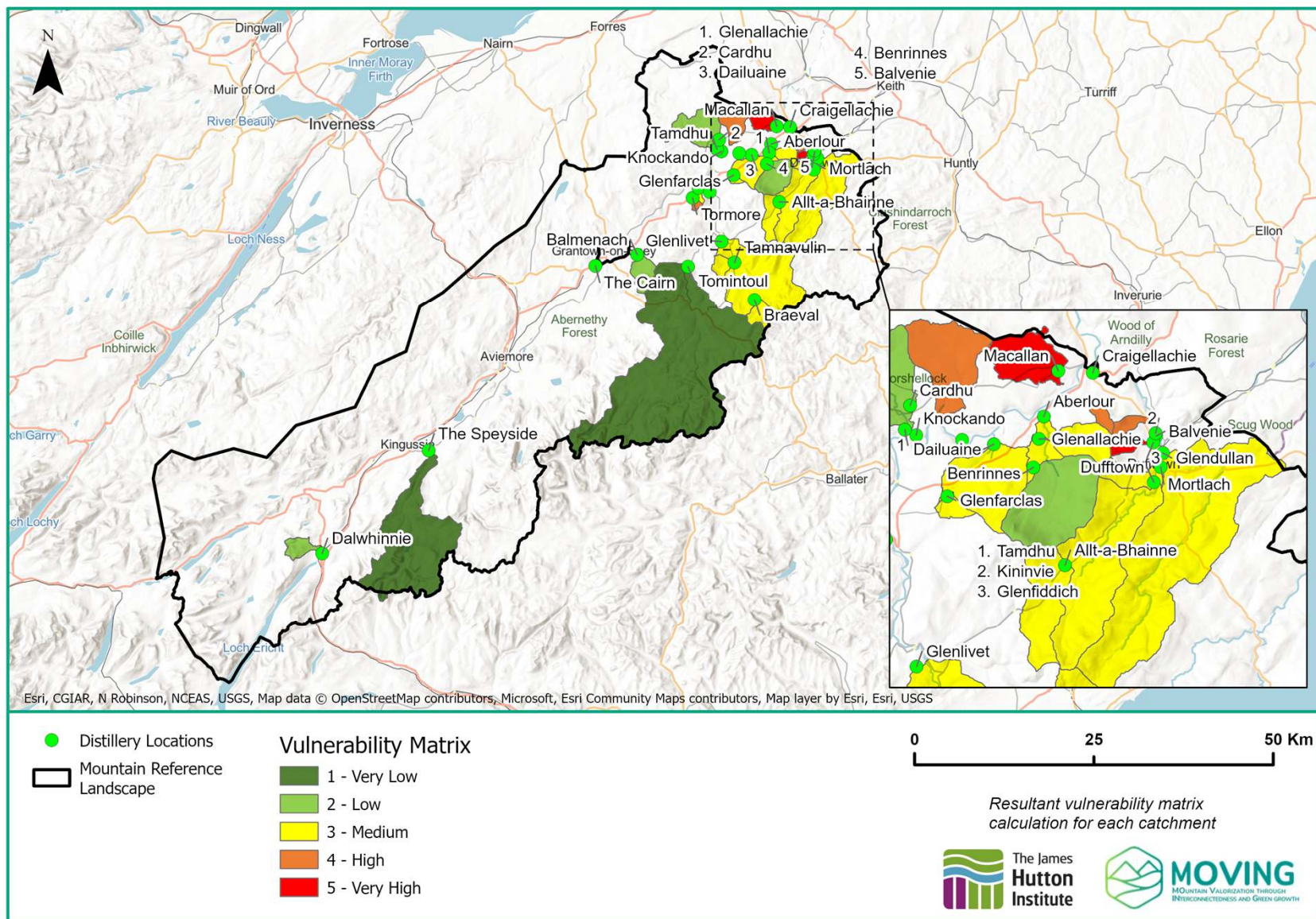
Where water is drawn from the lower reaches of the main channel of the Spey - e.g. for cooling purposes, a large catchment area is derived. For those distilleries in the upper parts of the catchment, smaller catchment areas result. Locations derived from OpenStreetMap by Jon Hopkins. Red inset shows area around Dufftown.

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MOVING
MOUNTAIN VALORISATION THROUGH
INTERCONNECTEDNESS AND GREEN GROWTH





MOVING

MOUNTAIN VALORIZATION THROUGH INTERCONNECTEDNESS AND GREEN GROWTH

Caveats:

Screening analysis

RELATIVE vulnerability

Total rainfall .v. demand from distilleries

does not include potential mitigation strategies or account for other water uses in the catchment.

Not a prediction of actual water insecurity

DRAFT

Malt Whisky VALUE CHAIN

20/2/22
V6.0

Kirsty, Sharon, Rachel

Speyside (Badenoch & Strathspey, West Moray), Scotland, UK

LEGEND

Territorial capital

Practices

Actors

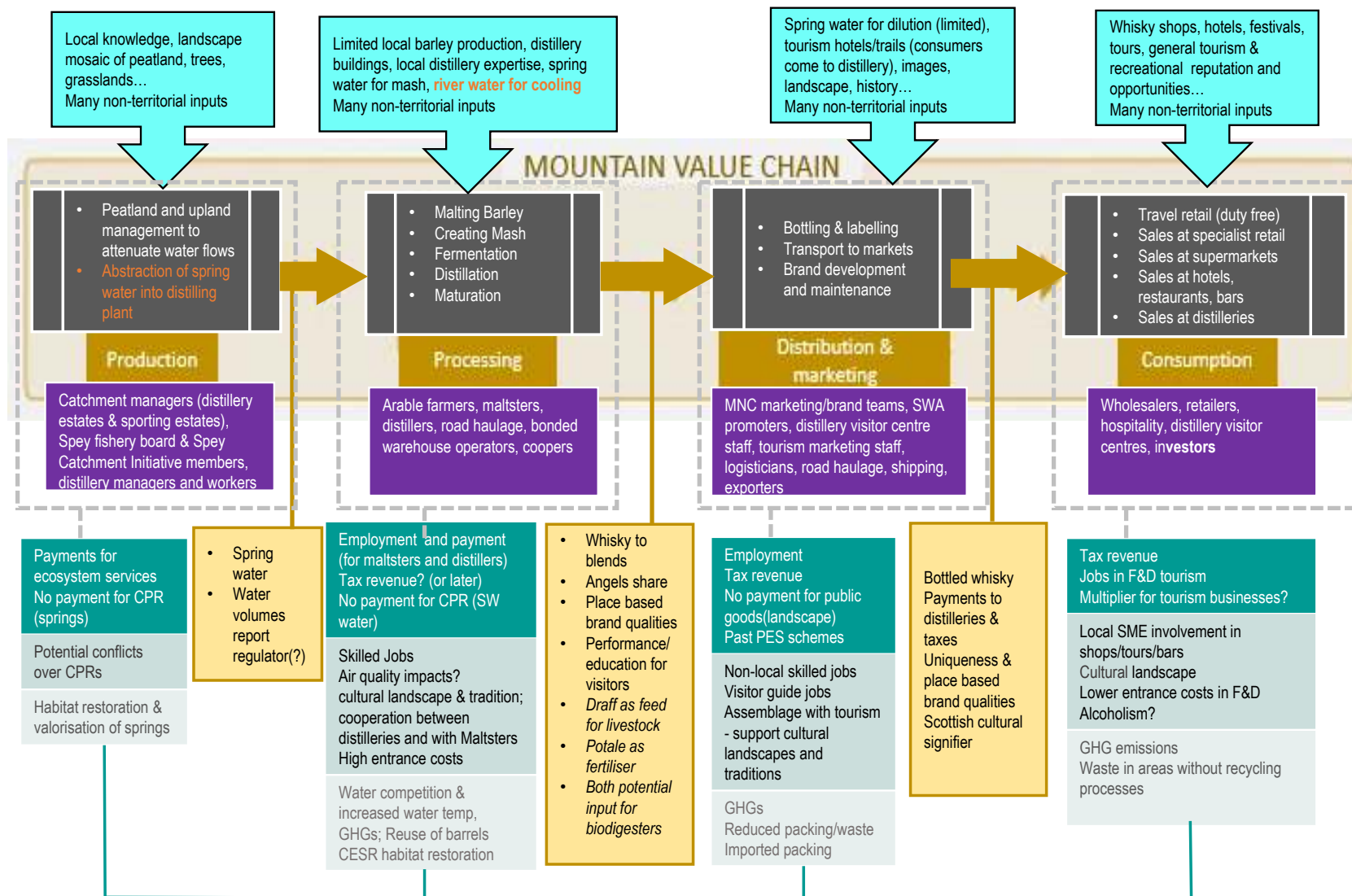
Flows
By-products

FOCAL
PRODUCT(S)

Economic value

Socio-cultural value

Environmental value



FOCAL VC

Speyside Malt Whisky from individual distilleries

ABBREVIATIONS

- CESR – Corporate Environmental & Social Responsibilities
- CPR – Common Pool Resource
- F&D – Food and Drink

- GHG – greenhouse gases
- MNC – Multi-national corporation
- PES – Payment for Ecosystem Services

- SME – small and medium sized enterprises
- ...
- ...

DRAFT MALT WHISKY VALUE CHAIN

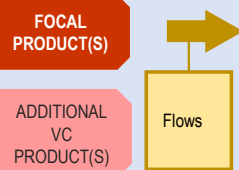
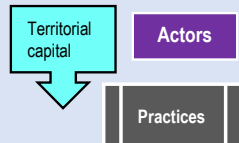
20/4/22

V6.0

Kirsty & Sharon

Speyside (Badenoch & Strathspey, West Moray),
Scotland, UK

LEGEND



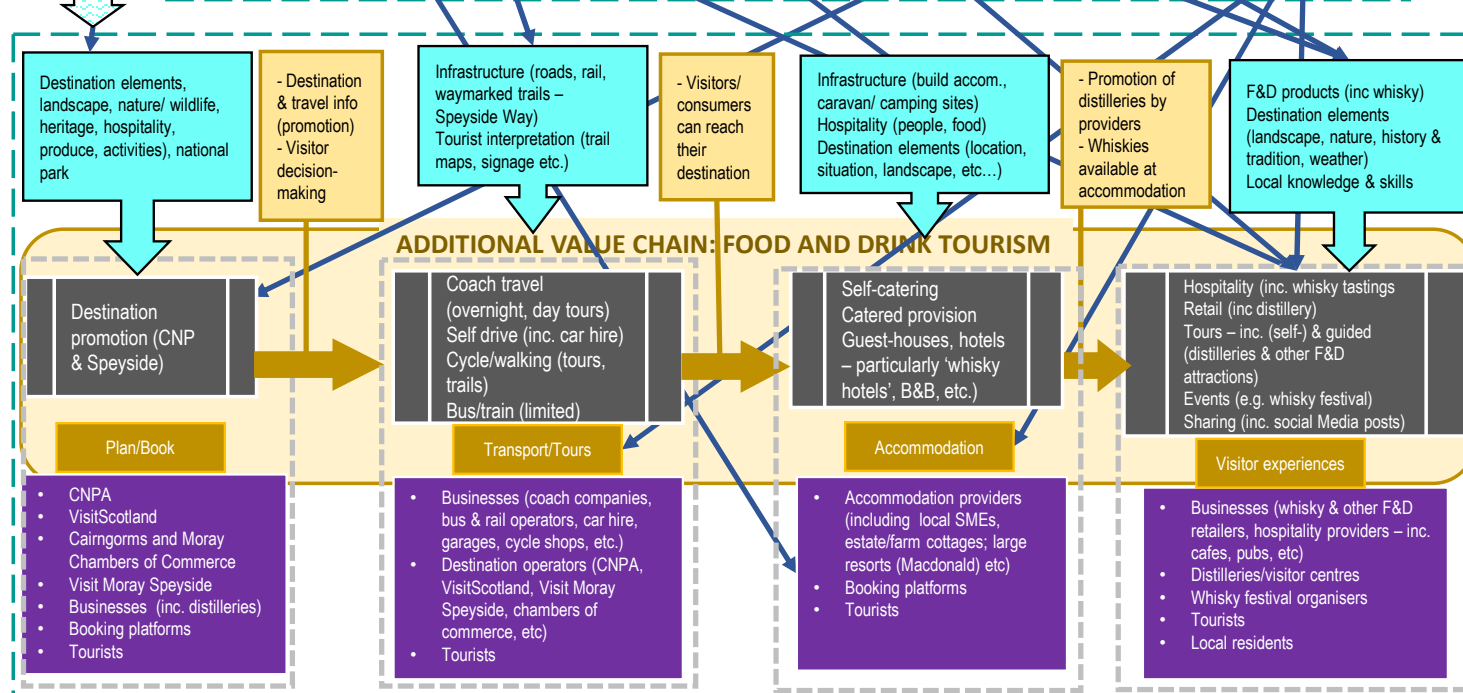
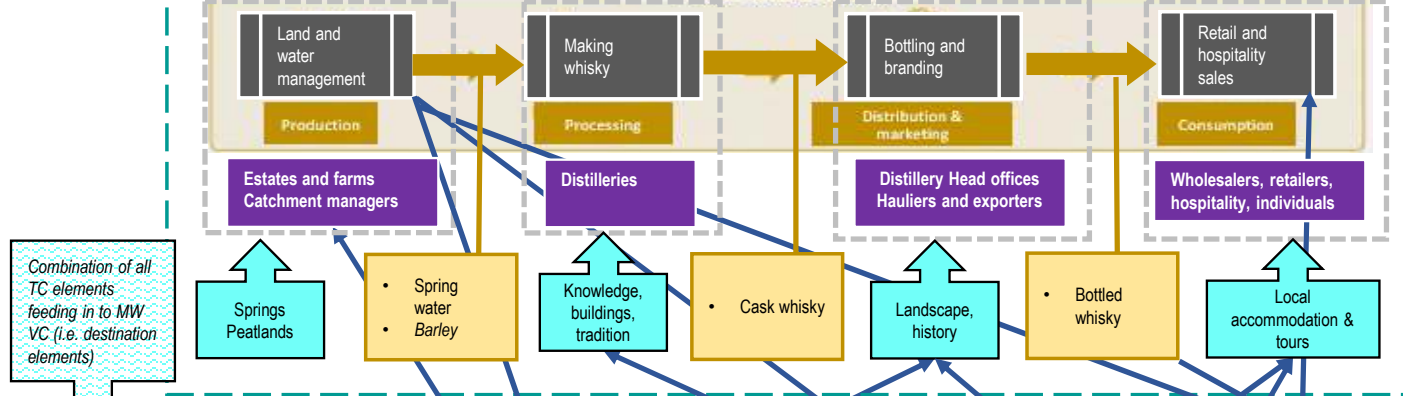
Mountain Reference
Landscape (MRL) scale



Connection (& direction)

Bi-directional connection

FOCAL VALUE CHAIN



ABBREVIATIONS

- CNP(A) = Cairngorms National Park (Authority)
- F&D = food & drink
- MW – malt whisky

- VC – value chain
- ...
- ...
- ...

- ...
- ...
- ...

Mountain Reference
Landscape (MRL) scale

ASSEMBLAGE

Speyside MW
VC &
associated food
and drink
tourism

Economic outcomes
Onsite whisky sales (+ upselling) + visitor related income (e.g. entry, hospitality)
Increased brand awareness or loyalty for distillery and area (impact on exports)
Increased revenue to invest in equipment, infrastructure, etc.
Increased employment = multiplier effect in MRL
Wider F&D tourism growth building on scale/importance of whisky
Mutual benefits of F&D products in area (underpinning destination value)
Concentration of single malts in Speyside = increased whisky tourism/consumer demand

Socio-cultural outcomes
Visitor Centre jobs (gendered, age)
Pride in distillery knowledge and skills
Opportunities for local SMEs
Visibility for environmental innovations; market for other local products in cafe
Health issues, Road traffic accidents
Shared cultural heritage/identity
Competition for staff
Whisky tourism credited in 'region-building'

Environmental outcomes
GHG emissions from transport (inc. air/ international travel), increased water use by visitor toilets etc, waste products (from catering and visitors)
Footprint of build infrastructure (e.g. parking)
Greater awareness of nature and resource use; shorter food miles

ADDITIONAL VC PRODUCT(S)
Speyside Whisky Festival
Specific Whisky Hotels
Cairngorms Whisky Self Drive Trail
Whisky Day Tours
11 Distillery Visitor Centres

DRAFT MALT WHISKY VALUE CHAIN

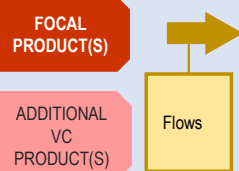
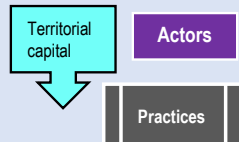
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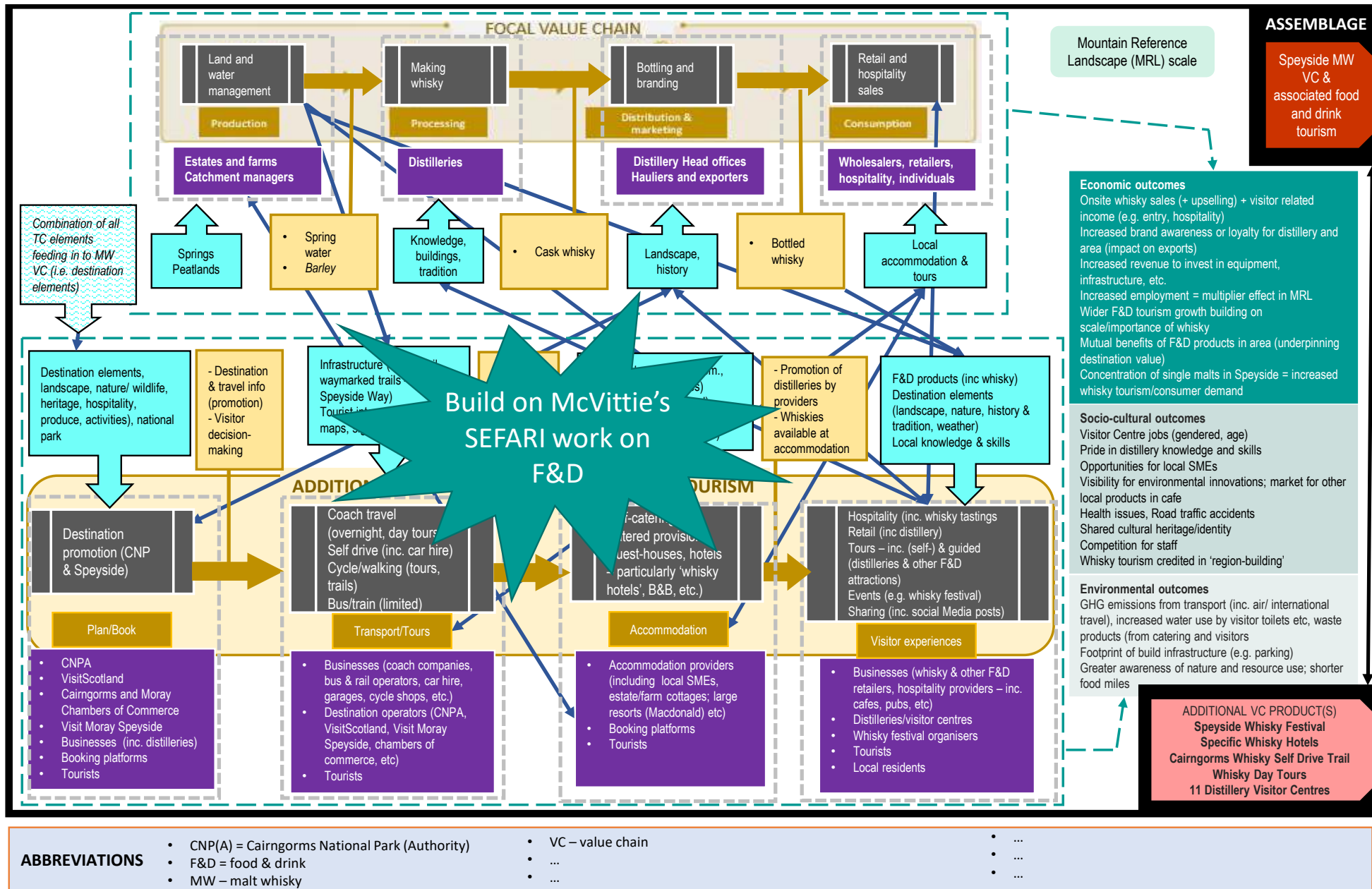


Mountain Reference
Landscape (MRL) scale



Connection (& direction)

Bi-directional connection



ASSEMBLAGE

Speyside MW
VC &
associated food
and drink
tourism

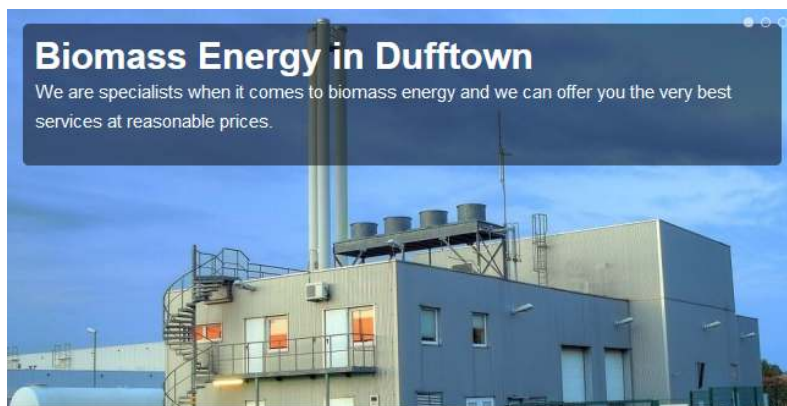
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ADDITIONAL VC PRODUCT(S)
Speyside Whisky Festival
Specific Whisky Hotels
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Alternative Assemblages

Shared territorial capital...By-products...Certification...

- Fly Fishing (shared common pool resource of water)
- Bioenergy (site specific reuse + inputs to refinery)
- Livestock farming (reuse of potale and draff)



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Diageo part-funds SCI
Chivas investment in rewetting
More explicit link to carbon
markets & 'rewilding'?



Thank you!

<https://www.moving-h2020.eu/>
<https://www.hutton.ac.uk/research/projects/moving-mountain-valorization-through-interconnectedness-and-green-growth-2020-2024>
[@MOVINGH2020](#)

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