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FOR HOCKEY

SUSTAINABLE HOCKEY FIELDS

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Content of today's presentation

- FIH Sustainability agenda – Hockey2024
- Elite hockey move to dry turf surfaces
- Can hockey once again successfully share fields with football?

Hockey

World's third most popular team sport - over 30 million players



Since the early 1980s hockey has preferred to play on syntetic turf surfaces

Played for life with
NUMBERS GROWING
at both ends

YOUTH

MASTERS

Over 3 million m² of hockey turf now sold every year

HOCKEY 2024 GLOBAL DEVELOPMENT STRATEGY



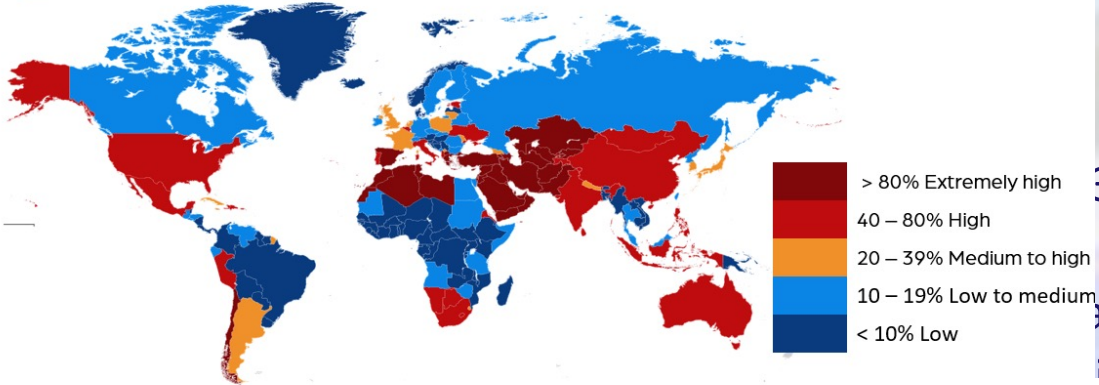
PARTICIPATION	EDUCATION	INFRASTRUCTURE	INSPIRATION
<p>More people participating in hockey globally</p>	<p>Better skilled and more professional hockey people</p>	<p>Stronger club, school & organisation networks</p>	<p>Hockey is a force for good in the world, as an advocate and contributor to the UN SDGs</p>
<p>More nations participating in international events</p>	<p>Hockey athletes at the heart of hockey programmes</p>	<p>More places to play and better access to equipment</p>	<p>Hockey is a force for good in the world, as an advocate and contributor to the UN SDGs</p>

A wide-angle photograph of a blue artificial hockey turf field being watered. A large, powerful jet of water is being sprayed from a nozzle on the right side of the field, creating a misty spray that covers a significant portion of the field. The field is marked with white lines, and a 'polyton' logo is visible on the right. In the background, there are trees, a stadium seating area, and a building under construction.

Hockey's move towards
Dry (non-irrigated) Hockey Turfs

Where Water Stress Will Be Highest by 2040

Projected ratio of water withdrawals to water supply (water stress level) in 2040



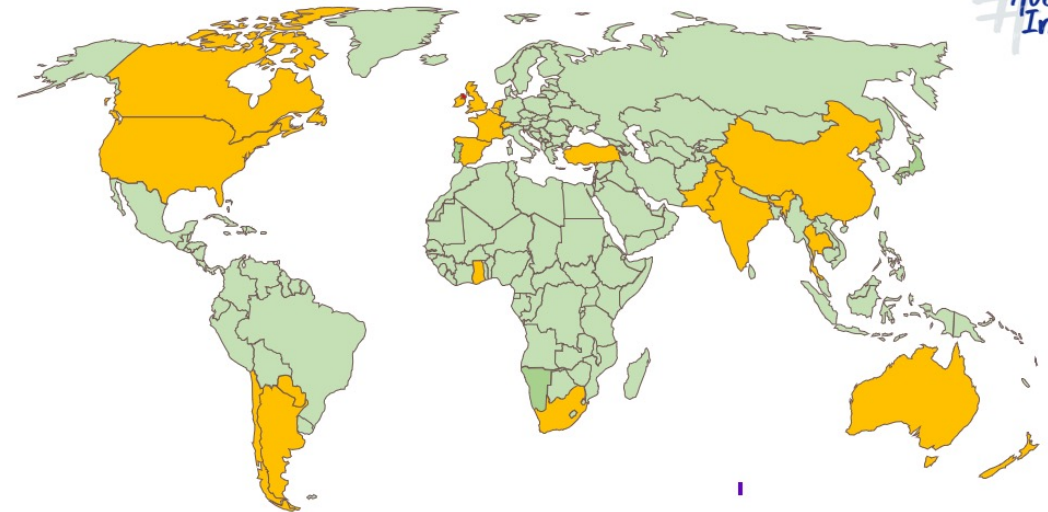
Source: World Resources Institute via The Economist Intelligence Unit

www.fih.hockey

#Hockey Invites
t needs to be used r
to use 1 l/m² each t
3 - 4 times per day
water than the Rio Oly
ing approx. 1 million



FIH Field certifications 2022



- An irrigation system adds approx. €60,000
- Irrigation operating costs are increasing
- Treating and pumping water creates a ne

www.fih.hockey/dryturf



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So at our 2018 Congress the FIH announced that it wanted the synthetic turf industry to:

“Develop synthetic turf surfaces that have the playing characteristics of wet turf, but do not require irrigation to achieve them”

- Currently our standards require Global category turfs to be watered. This ensures elite level performance
- Our current standards do not fully assess the properties influenced by water
- So we needed to update our standards to fully define the performance required from Dry Turf surfaces

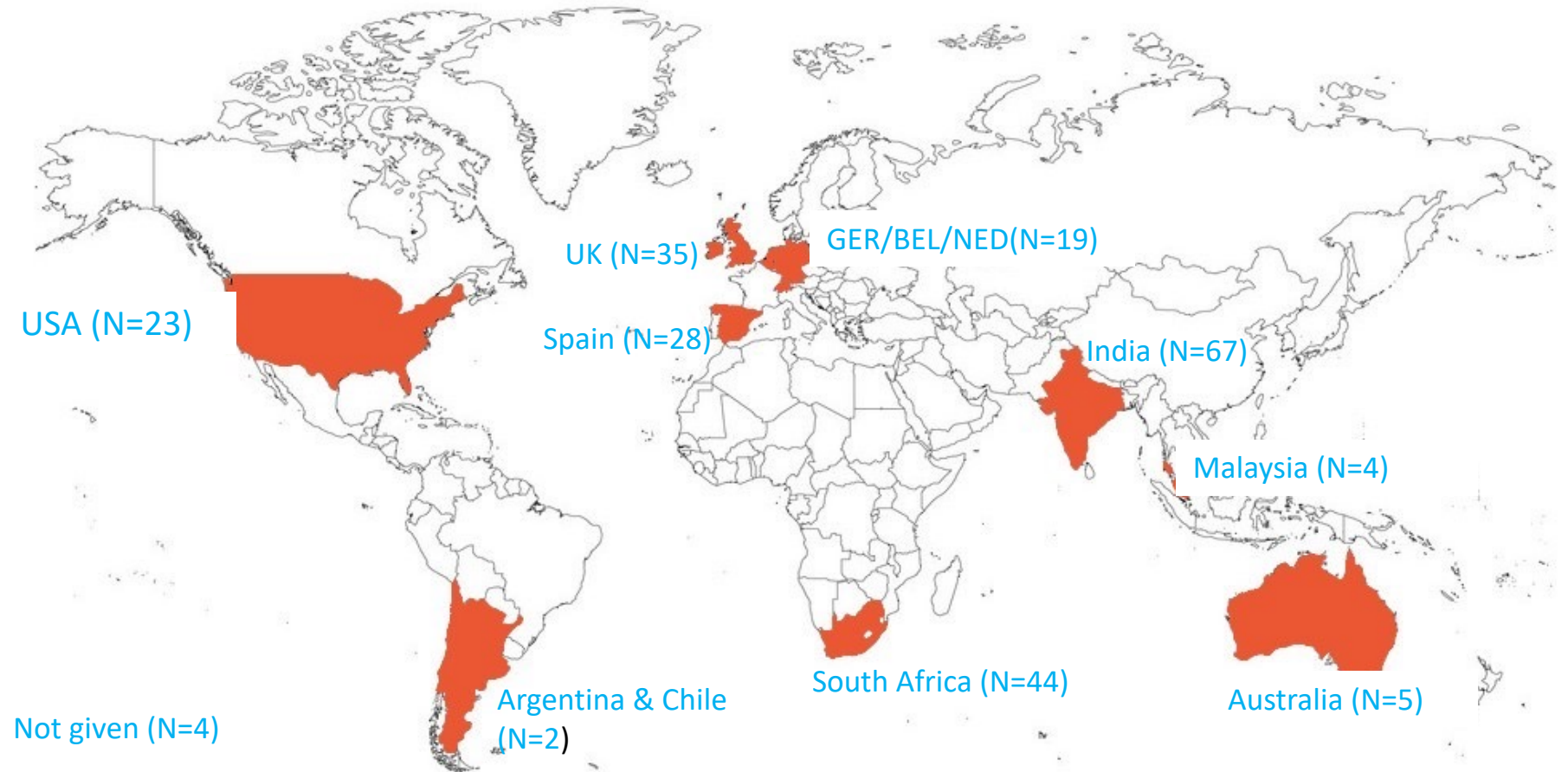
Stage 1 - Determine why players prefer wet surfaces

- Focus groups to develop questionnaire
- Global on-line survey



Elite player questionnaires (232 responses)

- Good gender balance
- Good representation of all playing positions



Ball / surface interactions

- Speed
- Consistency / trueness
- Bounce



Stick/ surface interactions

- Glid
- Smoothness
- Ability to initiate 3D skills

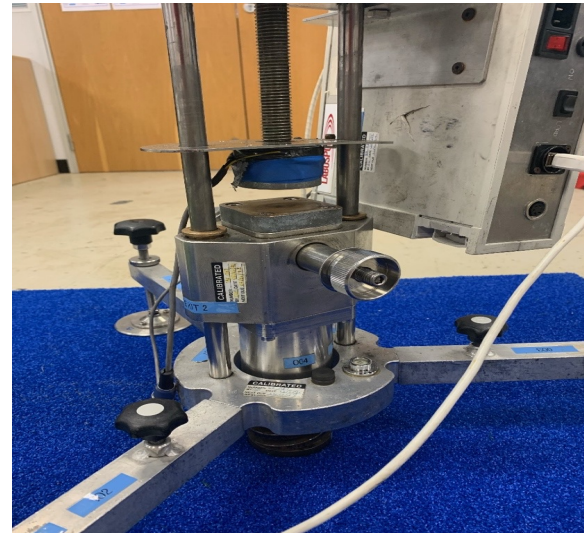
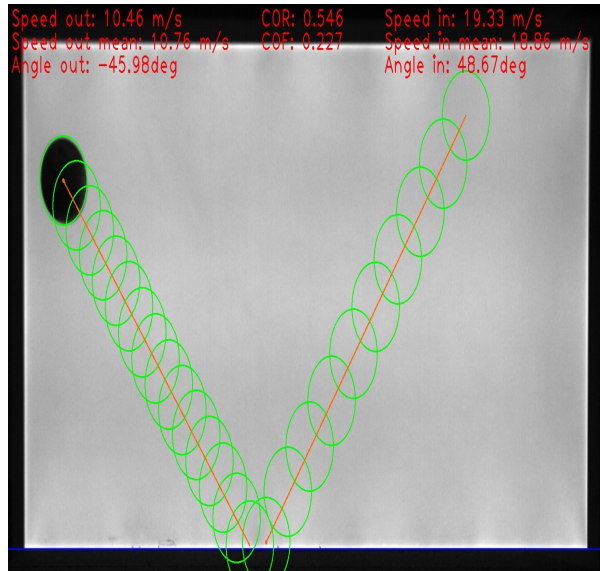
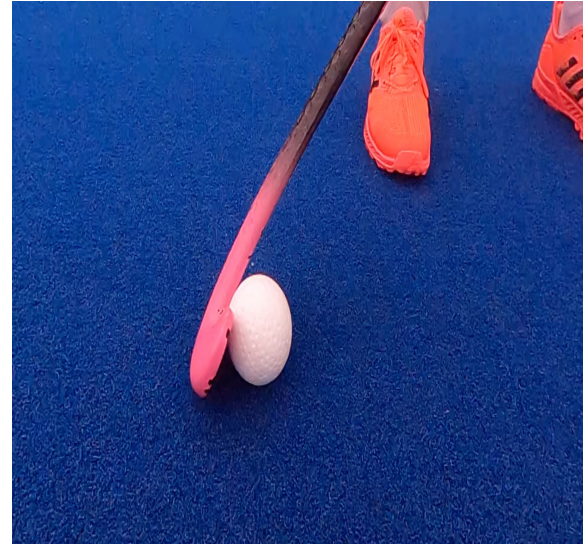


Player / surface interactions

- Shoe / surface friction
- Comfort & cushioning
- Skin friction



7.2017.25



In May 2023 we published an **Innovation Standard**. This describes the additional properties a Dry Turf needs to have to replicate the playing qualities of wet turfs:

- Turf/stick friction
- Ball speed and pace
- Ball rebound (ariel passes)
- Turf stiffness (linked to 3D skills)



of features

Dry Global category turf

Sand dressed turf (dry)

Sand dressed turf (damp)

Wet Global category turf

Inadequate performance

Adequate performance

Desired performance

Target range



Next steps

- Dry Turf surfaces are installed
 - Working with Loughborough University we will collect player feedback on how they perform
 - Based on the player feedback we will fine-tune our innovation standard and incorporate the findings into our requirements for Global category Hockey Turfs
- 
- A group of female hockey players in USA Hockey gear are gathered on a green artificial turf field. One player in the center is performing a drill, possibly a stickhandling exercise, while others watch. The players are wearing white jerseys with 'USA' and 'HOCKEY' visible, and red or black vests. The scene is set outdoors on a bright day, with long shadows cast on the turf.

Areas of specific interest:

- Performance
 - Stick/surface interactions
 - Ball control
- Player safety / comfort
 - Potential risk of carpet burns
 - Foot grip
 - Heat stress
- Types of shockpads & elastic layers
- Equipment
 - Shoes
 - Sticks
 - Balls

In Q3 2024 we plan to amend our *Hockey Turf and Field Standards* to incorporate the new tests and requirements into our Global category hockey turfs

From then onwards, Global category fields will be able to use:

- FIH Approved Dry Turfs
- FIH Approved Wet Turfs



The transition to Dry Turf fields for elite competitions

	Wet Turf	Dry Turf
2023	FIH Pro League	Hockey5s World Tour - Cairo
2024	FIH Pro League 2024 Olympic Games qualifiers Paris 2024 Olympic Games	FIH Hockey5s World Cups
2025	FIH Pro League	FIH Pro League
2026	FIH Pro League FIH World Cup qualifiers	FIH World Cup qualifiers FIH World Cups FIH Pro League Youth Olympics - Hockey5s
2027	FIH Pro League	FIH Hockey5s World Cup qualifiers FIH Pro League FIH Hockey5s World Cups
2028	FIH Pro League	FIH Pro League 2028 Olympic Games qualifiers LA 2028 Olympic Games

Companies already offering Dry Turf products

- Greenfields
- Polytan

Companies we know are looking to develop Dry Turfs

- Forbex
- Juta Grass
- Lano
- SIS Pitches

<https://www.fih.hockey/dryturf>



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Multi-sport surfaces hockey & football fields

GRASSROOTS

- A synthetic turf field is a major investment.
- For many building a field just for hockey is not viable
- For over 80 years hockey and football shared fields. The development of 3G football surfaces halted this, to the detriment of hockey
- Football specific turfs and the FIFA Quality Standards are designed to replicate natural grass - hockey moved away from playing on natural grass forty years ago

Does the development of 4G football surfaces and the introduction of the *FIFA Basic* category of performance provide an opportunity for GRASSROOTS hockey and football to once again share fields?

Today

- FIFA compliant ball rolls make surfaces too slow for most forms of hockey

Question - Is a short ball roll essential for low level football – in many countries, older fields with longer ball rolls are used for community football?

Answer - It seems not, the new FIFA Basic category allows a longer ball roll. If this is okay for older fields why not for new fields?

- Longer ball rolls = enhanced hockey performance



Non-filled 4G surfaces have a higher turf density – this means a hockey ball is more inclined to sit on the turf – not sink into the pile

The concept is already out there – especially in the USA

Test data shows:

- Football ball roll: 13.4 m
- Hockey ball roll: 8.0 m

Tests undertaken by Sports Labs USA



England Hockey, working with Sport England and the Football Foundation plan to trial 4G surfaces by Greenfields and AstroTurf/Polytan at a community site in England

- Player feedback will be collected from hockey and football players
- Performance data will be measured

If the results are positive FIH will amend its multi-sport category accordingly, and propose to FIFA that the One Turf concept for multi-sport fields is revised and reactivated



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Thankyou for your attention

ANY QUESTIONS?

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