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FOR HOCKEY

Hockey's move towards

# Dry (non-irrigated) Hockey Turfs

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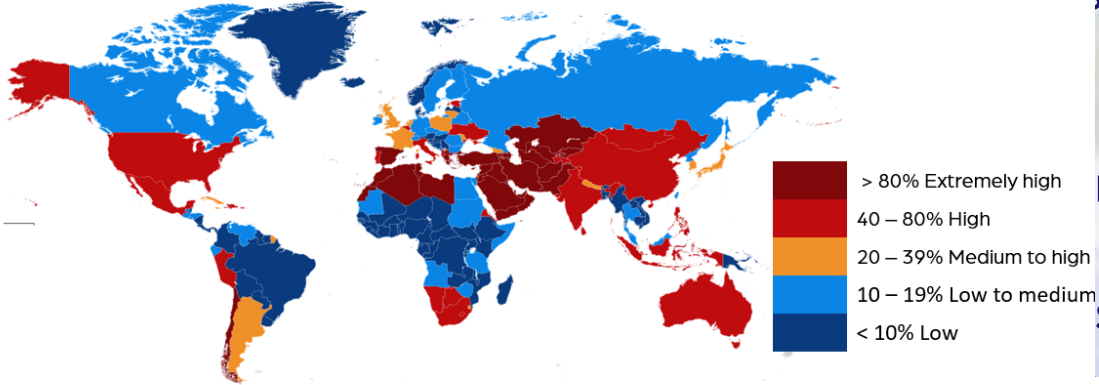
[www.fih.hockey/dryturf](http://www.fih.hockey/dryturf)



EuroHockey

## Where Water Stress Will Be Highest by 2040

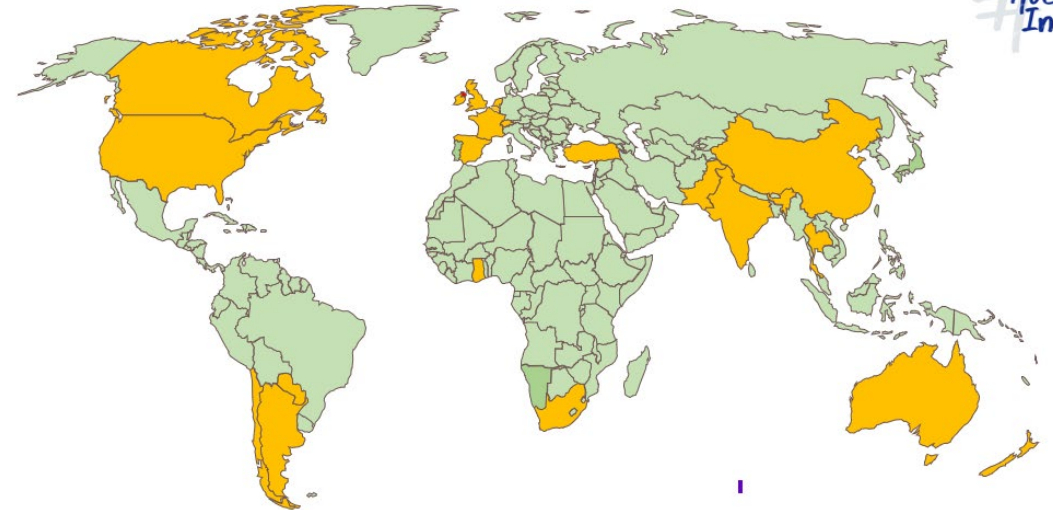
Projected ratio of water withdrawals to water supply (water stress level) in 2040



Source: World Resources Institute via The Economist Intelligence Unit

[www.fih.hockey](http://www.fih.hockey)

## FIH Field certifications 2022



- An irrigation system adds approx. €6
- Irrigation operating costs are increas
- Treating and pumping water creates

[www.fih.hockey/dryturf](http://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 used under wet conditions – so we need to update them to remove this obligation, whilst ensuring performance, player welfare and durability is maintained.

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)





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

## 2023/24

- Fields are built and surfaced with FIH Innovation Turfs
- Working with Loughborough University we will collect player feedback on how the surfaces 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

## 2025

- From 2025 onwards we expect Dry Turf technology to be adequate for all levels of hockey including international and top-level national competitions.



## Areas of specific interest:

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



# Which type of facilities should be considering Dry Turfs?

2023 / 24

As hockey starts to learn about this pioneering turf technology, we suggest it is initially installed on fields intended for national club and community use.

From 2025 onwards we expect Dry Turf technology to be adequate for all levels of hockey including international and top-level national competitions.





## 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

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

## Companies already offering Dry Turf products

- Greenfields
- Polytan

## Companies Known to be developing Dry Turfs

- Forbex
- Juta Grass
- Lano
- SIS Pitches



An aerial photograph of a large, multi-sports field. The field is green with white and yellow markings for soccer, basketball, and tennis. It is surrounded by a red running track and a white fence. There are several blue benches along the perimeter. The field is situated in a park-like setting with trees and a parking lot visible in the background.

Multi-sports fields  
maximising sporting opportunities

# A brief history of the evolution of community sports surfaces

Up till the 1980s



Hockey played on grass – often a cricket outfield (short cut smooth surface)

1980s and 90s



Community football & hockey played on sand filled turf

- Okay for hockey
- Not so good for football

2000s onwards



Hockey played on short pile sand dressed / filled turfs



Football played on long pile 3G surfaces



Football played on winter games grass pitches (long sward height, often rutted and uneven)

# GEN 2

Modified hockey surfaces



- Tennis
- Netball
- Futsal
- Lacrosse



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An aerial photograph of a school sports complex. The central feature is a large rectangular field with artificial green turf, marked for soccer and hockey. To the right of the turf field is a paved parking lot with several spaces. Further right is a baseball field with a dirt infield. The entire sports area is enclosed by a green fence. In the background, there is a residential neighborhood with houses and trees. A brick building, likely a school, is visible on the left side of the image.

What about  
hockey &  
football?



Environmental issues means football is having to look at new surface types – this creates an opportunity for a more hockey friendly solution





## Hockey specific

Elite competition  
High performance training  
Hockey clubs

Non-filled hockey turfs  
Sand dressed hockey turfs

50 : 50

## Football : Hockey

Small sided football, Futsal, Hockey5s  
Lacrosse, GAA, American football

Lower-level club hockey

Recreational football

School's hockey

School's football

Walking sports

Disability sports

## Football specific

Professional  
Semi professional  
Community football clubs

Natural grass  
Hybrid grass  
Long pile synthetic turfs

Let's challenge the industry to develop a new type of turf  
that works for many sports



An aerial photograph of a large, rectangular sports field. The field is divided into several sections, each marked with white and yellow lines for soccer and basketball. There are several soccer goals and basketball hoops scattered across the field. The field is surrounded by a dense forest of trees with autumn foliage in shades of orange, yellow, and brown. In the bottom left corner, there is a parking lot with several empty spaces. In the bottom right corner, there is a building with a white, corrugated metal roof. The text "The concept is already out there — especially in the USA." is overlaid in white, sans-serif font across the center of the image.

The concept is already out there —  
especially in the USA.



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# ANY QUESTIONS?

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