



FIFPRO

In cooperation with

KPMG



2021

FIFPRO PLAYER WORKLOAD MONITORING

Annual Workload Report – Women's football

01

ABOUT

FIFPRO PLAYER WORKLOAD MONITORING (PWM) PLATFORM

Launched in early 2021, the FIFPRO PWM platform is a digital tool tracking the workload status of professional football players from around the world.

FIFPRO PWM is a player-centric, match scheduling and workload monitoring, platform developed and operated jointly by FIFPRO and KPMG Football Benchmark. It is part of FIFPRO Player IQ Hub, a player-focused knowledge centre that aims to help shape decisions in the football industry to protect and improve the careers and working lives of footballers.

FIFPRO PWM combines world-leading scientific knowledge with data insights to monitor player workload and match scheduling across different competitions. This analytics tool enables better decisions to be made in relation to future competitive scheduling, making

competitions more sustainable and putting players' health, careers, and performance first. The rich database held within FIFPRO PWM's continuously evolving platform is the source of the analysis presented within this Full Season Report on women's football.

The FIFPRO PWM platform is freely accessible at FIFPRO's Player IQ Hub, and at the KPMG Football Benchmark. Please visit the platform to see information on all of the 85 female players featured within this report. The platform also contains workload data and analysis on 265 male players.

 The FIFPRO PWM platform is freely accessible at the [FIFPRO website](#) and at the [KPMG Football Benchmark website](#).

FIFPRO PWM FULL SEASON REPORT

This workload report is the first in the series of annual publications taking a long-term view of the workload situation of professional players in women's football. The objective of these reports is to assess long-term trends of workload indicators over the course of several seasons. In doing so we can uncover any worrying signs of underload and (periodical) overload, whilst also identifying problem areas for the physical and mental wellbeing of players.

The report analyses match workload, rest & recovery periods, periodic fixture congestions and travel load, amongst many other topics. We also look at changes to the international match calendar of women's football that will undoubtedly shape the discussion around the future of the sport.

KPMG FOOTBALL BENCHMARK

KPMG Football Benchmark is a digital data & analytics platform that includes financial and operational performance data from more than 200 European and South American professional football clubs, as well as social media performance metrics of hundreds of football clubs and players. The business intelligence tool also provides market value estimates for 8,500+ male players, covering the best leagues of the UEFA, CONMEBOL and AFC Confederations.





"The health and wellbeing of players should always be a priority for professional football and at the centre of coordination and collaboration between competition organisers and regulators. FIFPRO will use the key data and findings in this report to promote and negotiate innovative and tailor-made developments to protect players, support their performance and maximise the growth of the women's game."

**Jonas
Baer-Hoffmann**
FIFPRO General Secretary



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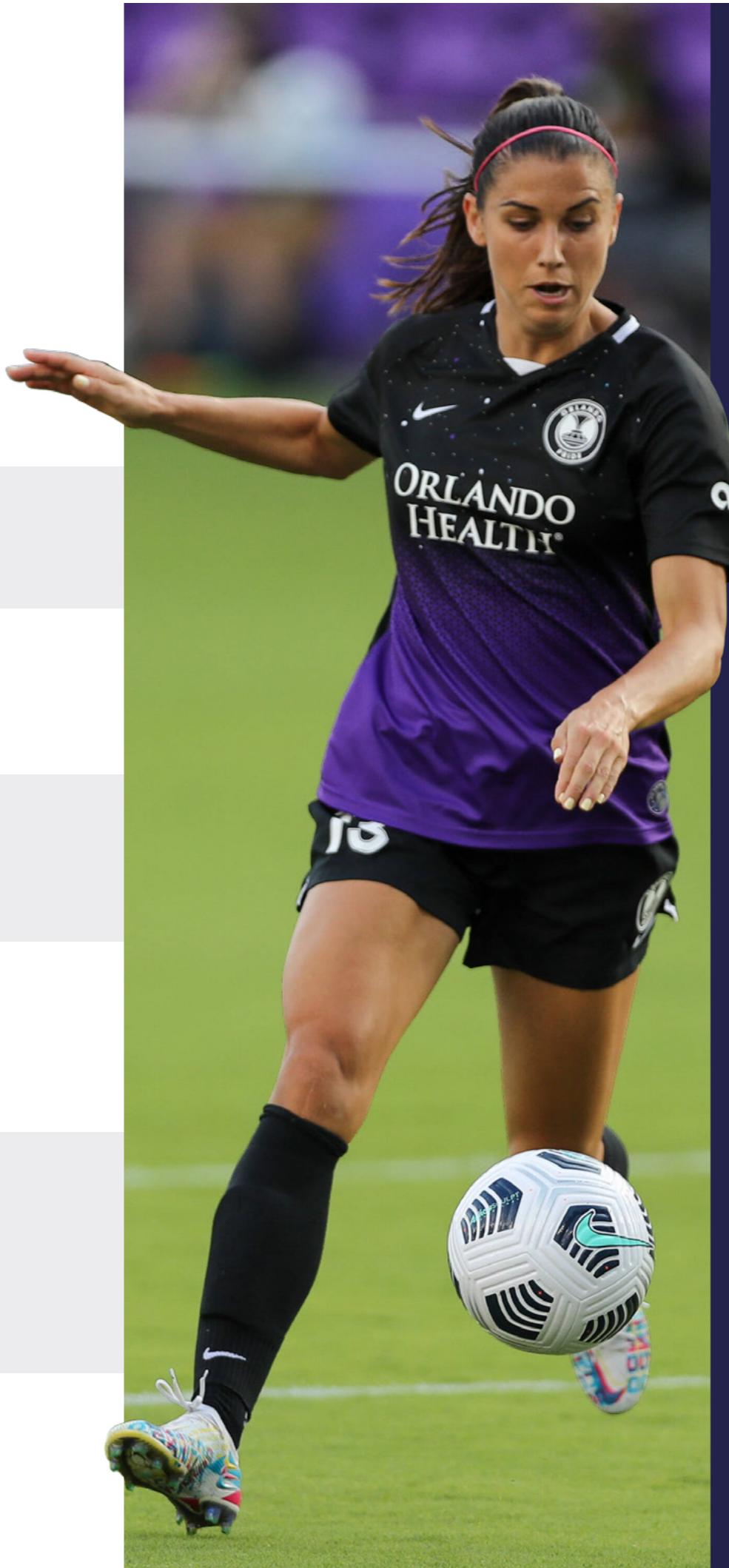
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02 / KEY FINDINGS

CRITICAL WORKLOAD FACTORS ACROSS THE LAST THREE SEASONS

- The underload of professional women footballers is one of the most pressing issues in the sport today. Even at the very top of the game, elite players are afforded a relatively low number of appearances each season, limiting growth and development opportunities for the players as well as the sport overall. The COVID-19 pandemic led to a further decrease: in the 2019/20 (and 2020) season a player in the PWM sample played only 22 matches on average.
- Underload is exacerbated by the lack of high-quality international club tournaments globally, the low number of professional teams and the long breaks between seasons in most parts of the world. Remarkably, around 14% of all minutes played by an average player of the PWM sample came in non-competitive, friendly matches.
- Linked to underload is the uneven distribution and scheduling of matches in the calendar. Long, quiet periods are juxtaposed with bursts of overload in which players need to play an unusually high number of games in a short window. Additionally, the scheduling of games is important. The match calendar is more dense and sparse at the same time, meaning when the games are scheduled is crucial. To enable better scheduling more collaboration across stakeholders is needed.
- Overload and periodic congestion occurs for some players at the elite end of the game. However, the data shows that this is not because of a high total amount of games. Rather, it is due to the aforementioned uneven distribution of matches and lack of overall balance in the match calendar – particularly during years in which an international tournament is held during the Northern Hemisphere summer.
- Within the PWM sample, six players played more minutes with the national team than with their clubs during the analysed period. International football plays a critical role in the development and growth opportunities (both sporting and sometimes employment) for many top women's footballers, and the data in the PWM tool shows us how significant a role national team football plays – particularly in the CONCACAF region, which is largely characterized by short club seasons and a lack of continental club matches. Overall, 25% of match minutes for players in the sample came from national team football.
- National team competitions provide a critical source of top-level games for most players. However, over-reliance on these match types may not be sustainable in the long term; more club opportunities are needed, particularly in consideration of where the majority of sustainable employment opportunities can be found. It is expected that more players will be involved in more international competitions in the near future – particularly looking at potential continental competition expansion and reforms, for example – which will increase the travel load. As and when this happens, attention must be paid to providing travel conditions for players that meet their physiological needs. This is something that has often been neglected and not regulated well enough.



"The overarching theme is how can we make this League the most professional and in the best interests of the players, the League as a whole, and the fans? I think we're just not accomplishing that with how the schedule has been set up in the past."

Alex Morgan

San Diego Wave FC, USWNT

03

METHODOLOGY OUR ANALYTICAL APPROACH

The findings presented in this annual report are largely based on data from the FIFPRO Player Workload Monitoring (PWM) digital platform covering the match, rest & recovery, travel and other workload statistics of professional footballers from around the world.



03

METHODOLOGY

OUR ANALYTICAL APPROACH

To put the results of this report into context it is important to understand the key characteristics of the underlying dataset.

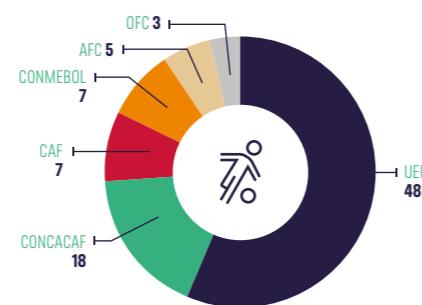


PLAYER SAMPLE & PROFILES

There are currently 85 professional female footballers in the PWM platform, representing a wide range of nationalities. The chart (right) shows player nationality by Confederation.

Different players are exposed to different levels of workload. For a more nuanced view of the issue we have identified three distinct groups whose workload figures have been compared in the report.

1. **Domestic focus:** players mostly exposed to domestic workload (maximum of 4 national team or international club competition matches within the same season)
2. **International workload:** players frequently playing international competitions (minimum of 15 national team or international club matches in the same season)
3. **Highest workload:** Top 10 players with the most minutes played across all competitions in a season



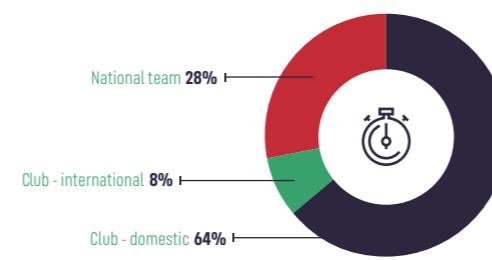
PERIODS ANALYSED

All matches currently featured in the PWM platform took place between June 2018 and November 2021. This selection covers three full football seasons for most players.



MATCHES COVERED

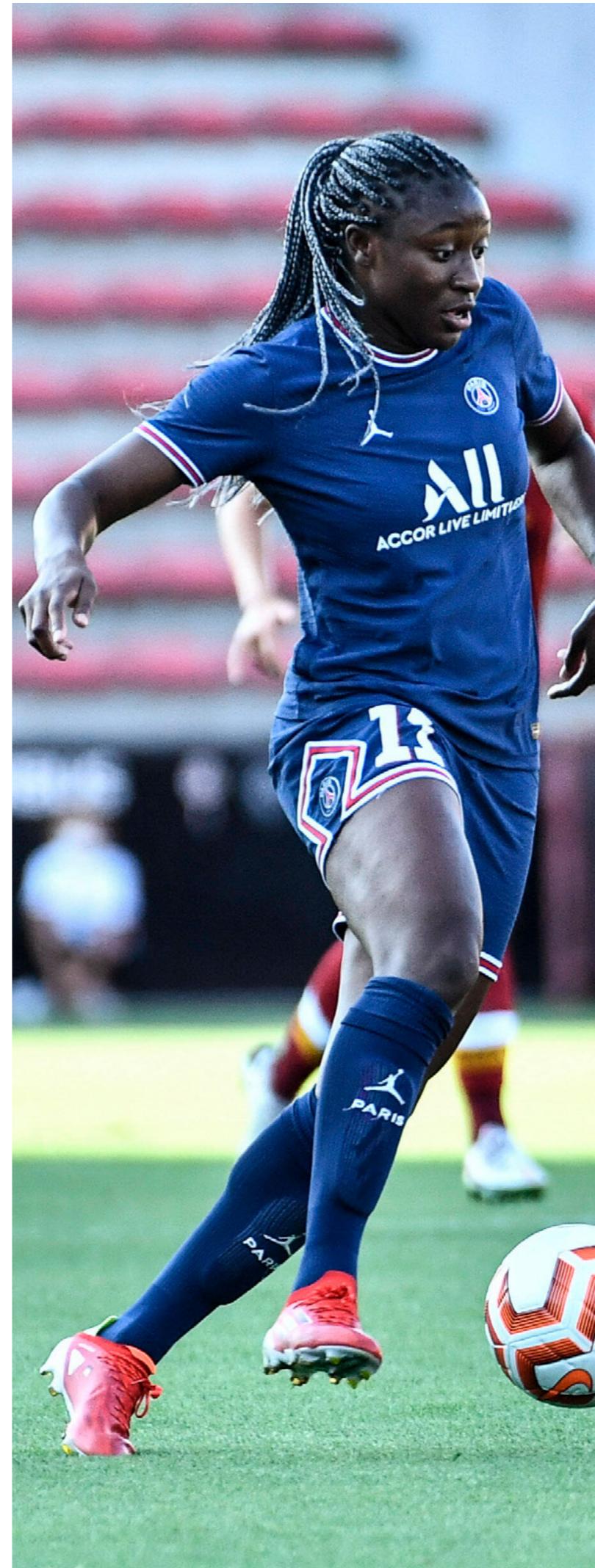
There are currently close to 10,000 player appearances on record in the PWM platform. This includes all competitive and friendly matches of all female players of the sample. Appearances are categorised as either domestic club, international club or national team matches.



SEASON DEFINITION

While most competitions featured in the PWM platform follow the Autumn-Spring schedule (e.g. 2019/20 season), some are organised on a calendar year basis, the so-called "Summer leagues" (e.g. 2020 season). Two major examples of the latter are the Damallsvenskan (Sweden) and the NWSL (USA).

In order to make them comparable, the data related to summer leagues were re-categorised under the Autumn-Spring schedule seasons closest to them. For example, 2019 season data is referred to as 2018/19 in our analysis, 2020 is labelled as 2019/20, while 2021 is compared to 2020/21.



"We are fortunate to have a well-organised programme at both club and national team level that helps us prepare optimally, but we know that's not the case for everyone. If we want our game to move forwards, we need everyone to be able to prepare and raise their game – which will in turn push us."

Kadidiatou Diani

Paris Saint-Germain FC,
France national team

TERMS & DEFINITIONS

The following terms are used throughout the report to illustrate the workload situation of professional football players. The same principles are applied within the FIFPRO PWM platform.

GLOBAL PLAYER AND COMPETITIONS

 **FIFPRO PWM SAMPLE** - This annual report analyses match schedule and workload data of the 85 female professional football players who are part of the FIFPRO PWM platform. This is a diverse group, representing players from 6 Confederations and 7 domestic leagues. The analysis covers all of the matches played by these players, including official club and national team matches as well as friendlies

PLAYER WORKLOAD

 **PLAYER WORKLOAD** - This term refers to all applicable workload indicators such as match workload, rest & recovery and travel. The concepts of overload and underload relate to the imbalance between the load induced on players (match workload and travel log indicators) and their recovery (rest & recovery indicator). It is important to note that it is the cumulative exposure to overload or underload which really impacts on a player's health, performance and career longevity.

MATCH WORKLOAD

 **MINUTES PLAYED AND APPEARANCES** - The number of minutes spent on the pitch by a player during a match. Includes added time at the end of the first and second halves as well as any extra time required for competitions (where applicable). If a player played any length of time of a match then it is accounted for as an appearance.

 **MATCH TYPE** - Matches played by a player are divided into various categories: domestic league, domestic cup, international club competition, national team matches and friendlies.

 **CRITICAL ZONE** - A match is considered to fall into the "critical zone" if the player was on the pitch for at least 45 minutes and played a minimum of 45 minutes in the previous game and did not have at least 5 days of rest and recovery time between these two appearances. It is important to note that it is the cumulative exposure to matches in the critical zone, together with travel, and potentially shortened off-season and on-season breaks, that constitutes an issue for a player's health, performance and career longevity.

REST & RECOVERY

 **REST TIME** - The period (in hours and days) between the end of a player's previous match and the start of their next match. This is generally the time allocated to rest & recovery and training. According to FIFPRO's 'At the Limit' study from 2019, players need at least 120 hours (5 days) between games to perform at their best over a season and to manage injury risk.

 **OFF-SEASON BREAK** - The period given to players between two seasons, without training or matches, in order to recover and regenerate. Off-season breaks are mandatory, should last at least 28 days (combination of physically inactive and active weeks) and must take place outside the club and national team environment.

 **IN-SEASON BREAK** - The period (in calendar days) that a player is permitted to take without matches or training, during a season. On-season breaks are mandatory and should last 14 days. However they are sometimes not honoured, particularly given the demanding requirements of the match calendar.

 **RE-TRAINING** - Following the off-season break / holiday period, a minimum acceptable period of time for re-training and preparation must be guaranteed to all players before participation in future competitive matches. The optimal duration of a re-training period depends on various factors including the physical status of the player and the duration of the break itself. However, it is considered that a re-training period lasting at least 4 weeks is needed to work fundamentally on injury prevention and to optimize future performances.

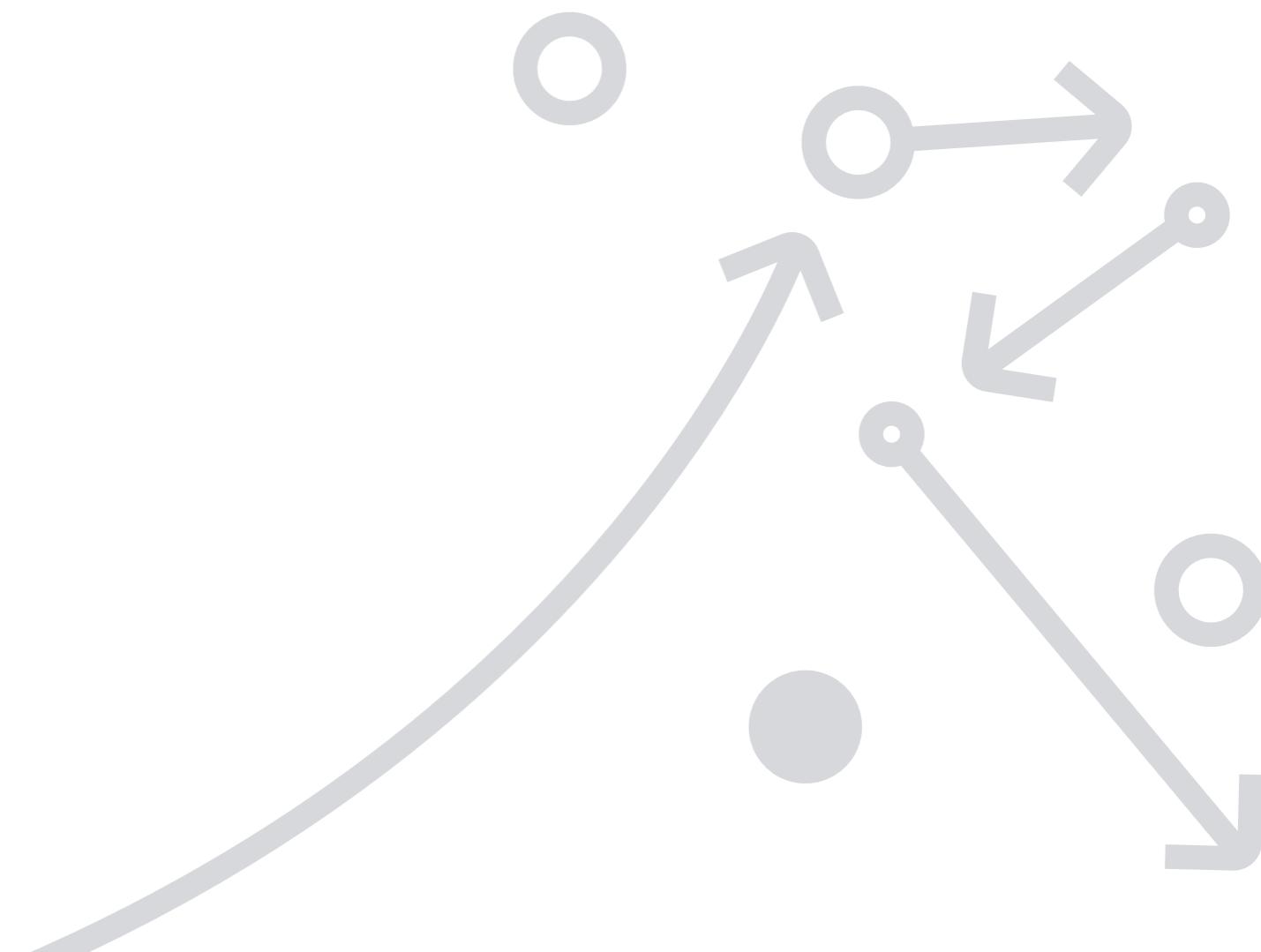
TRAVEL

 **TRAVEL DISTANCE** - The flight distance in kilometres between the departure and arrival location. Only trips made for national team matches or club matches played abroad are considered for analysis.

 **TRAVEL TIME** - The flight time expressed in minutes between the departure and arrival location. Only trips made for national team matches or club matches played abroad are considered for analysis. For every calculation the speed of an average commercial flight is assumed. 20 minutes are added to account for take-off and landing.

 **TIME ZONES CROSSED** - Many matches are played in time zones different to the one the player usually stays in. This indicator sums up the number of time zones crossed during the trip the player takes to and from the location of such matches. An excessive number of time zone crosses can have an adverse effect on the player's mental and physical well-being as it often takes a while for the body to get accustomed to another time zone and location.

 **EXTREME CLIMATE CONDITIONS** - Cases in which players need to appear in matches played in different climates within a relatively short period of time. Peak performance is difficult to achieve without allowing enough time for the body to get accustomed to a vastly different climate environments. Cases like this often involve players travelling to another continent or between the northern and southern hemispheres



04.

INTRODUCTION

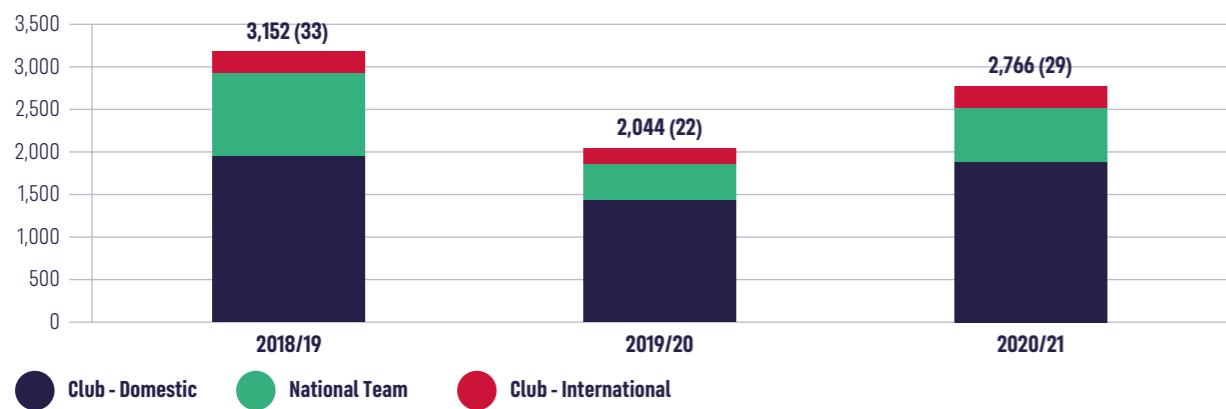
The first step in analysing the workload of women's football players is to assess their overall playing time and put it into context. In this introductory chapter we calculate the average of on-pitch minutes of top players over the last three full seasons. This period includes and records the impact of the COVID-19 pandemic during 2020, and outlines the emerging patterns in elite women's football that characterise the professional and international game. We also know that the playing minutes and the number of matches alone do not tell the whole story of a player's experience of workload. In this chapter, Dr. Sean Carmody, Chelsea FC Medical Doctor, shares his views on the many contextual factors which should be identified and considered when discussing and subsequently managing micro and macro workload for women's football players.



04 / INTRODUCTION

HOW MUCH ARE TOP PLAYERS ACTUALLY PLAYING?

Average minutes played per player per season



Note: numbers in brackets show the estimated full appearance equivalent of the minutes played.

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

The findings presented in this chapter are related to the 85 top female players who are featured in the FIFPRO PWM platform. Even though the values should not be treated as wholly representative of the entire footballing pyramid, they provide a snapshot assessment of the current state of elite level women's football. This sample includes some of the world's most high-profile players, who are involved in the most competitions at the highest level and thus are – in theory – subjected to the highest workload. In this regard their figures can be treated as indicative, with many players in the sample featuring in established competitions and leagues, both nationally and internationally.

KEY FINDINGS

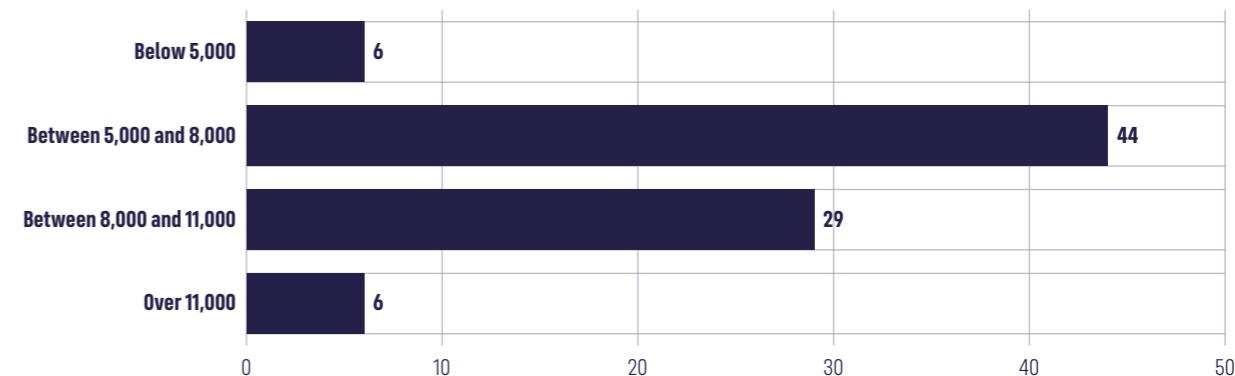
- Playing time is defined as minutes spent on the pitch in all competitions, including friendlies. First of all, we found that the average minutes played indicator changed significantly over the last three seasons. Starting from 3,152 minutes per player in 2018/19, it dropped to 2,044 in the COVID-impacted 2019/20 season, before slowly increasing again up to 2,766 minutes for 2020/21.
- In terms of appearances this means that a typical player in the sample averaged around 33 games in 2018/19, but then registered only 29 in 2020/21.
- The high figure of the 2018/19 season is mainly driven by national team competitions, including international tournament qualifiers and friendlies. During that season, an average player in the sample played 31% of their minutes for the national team. A total of 68 players included in the PWM sample took part in the 2019 FIFA Women's World Cup held in France.
- The 36% year-on-year decrease in average minutes played for the 2019/20 season is mainly due to the COVID-19 pandemic, which led to the cancellation of several competitions. While there were many different applications of COVID-19 rules from country to country, outcomes can be grouped into one of three categories: leagues were either curtailed (shortened), finished in full at a later date, or cancelled altogether. The majority of leagues in women's football were curtailed, especially in countries where the competition had an amateur or semi-professional designation, or where there was a lack of funding available for COVID-19 protocols. Internationally, many of the nascent international club competitions were not able to take place as scheduled, such as the AFC Women's Club Championship. However, the 2019/20 UEFA Women's Champions League was able to eventually be completed as an eight-team, single-tie, knockout tournament in a bubble environment, after it had been initially postponed.

This format change guaranteed the safety of the players whilst still allowing the top European clubs to compete for the top club prize

- In 2020, minutes played in national teams setting particularly suffered a high decrease (-57%), followed by domestic club and international club competitions (-25% and -24%, respectively). It should also be noted, that national team football was additionally gravely affected as the 2020 Summer Olympics had to be postponed to 2021, as well as the final stages of the Olympic qualification process in the AFC, CAF and CONMEBOL regions. There was a knock-on effect on major continental competitions, too, with the 2020 Women's Africa Cup of Nations cancelled altogether and the UEFA Women's European Championship 2021 rescheduled to 2022.
- On the international stage, national team playing minutes also increased in 2021, mainly as a result of the Tokyo Olympic Games held in July-August. Almost half of the PWM women's football sample (40 players) took part in tournament, getting crucial playing opportunities in a competitive tournament setting – still a rarity in women's international football.

Distribution of PWM sample players by total minutes played

Number of players by total minutes played between 2018/19 and 2020/21



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

- There are only six players in the PWM sample with over 11,000 minutes played since 2018; all of them are from the UEFA confederation and three of them play for FC Barcelona. This finding shows the importance of international club competitions, which can "extend" the season of players. The most advanced such tournament is the UEFA Women's Champions League.
- 29 players (34% of the sample) played between 8,000 and 11,000 total minutes in all competitions. This second cluster consists exclusively of players based in the UEFA region.
- More than half of the sample (52%), played between 5,000 and 8,000 minutes between 2018/19 and 2020/21. If we consider a full game being equal to approximately 95 minutes, it means that half of the

players included in the sample played on average between 18 and 28 matches per season.

- Finally, there are six players who played less than 5,000 minutes over the past three seasons, which equates to fewer than 18 games per season. This is mostly a result of the sample selection that prioritized players who have historically been key members of their clubs.

Whilst these numbers and analysis comprise the first critical step in assessing overall playing time, there are many more contextual factors that form the overall view on player workload. Dr Sean Carmody gives his expert opinion on what these factors are where they are situated – both independently and in relation to each other.

EXPERT OPINION PIECE:

DR. SEAN CARMODY (CHELSEA FC MEDICAL DOCTOR)

There are many contextual factors which should be borne in mind when considering workload amongst women's football players. The extent to which these factors are modifiable vary considerably, as does the extent to which different practitioners (e.g. technical, medical, sport science) can influence each variable. Therefore, detailed monitoring of the match schedules and workload of footballers across different competitions, including but not limited to the following considerations (listed here and throughout this FIFPRO report), is critical to the future physiological health and wellbeing of the players. Proper examination is likely to provide insights which better support the health and performance of the players, which, in turn, can contribute to a higher quality experience and spectacle for all. These considerations include competition, environmental, physical and psychological factors.

With regards to competition, training and match factors are key in dictating player workload. The time of year, match importance, tactics, time between consecutive games (scheduling), distance travelled as well as travel conditions, and score-line are some of the details which may influence player workload.

Additionally, players may be expected to deliver performances in environmentally challenging conditions. Extreme weather (e.g. heat), altitude and humidity can impact health and performance. There is established evidence that coaching style can also influence injury risk. A more recent ongoing concern is the influence of COVID-19 on player workload, with increased levels of stress, diminished squad sizes, and players returning to play soon after illness all potentially influencing workload outcomes. The COVID-19 initial pandemic period also exacerbated existing fragilities within the sport, particularly concerning resources for health and safety protocols.

There is concern with the scheduling of fixtures and competitions in women's football as there is little understanding at present of the effects of match congestion on player health in female footballers.

Our understanding to date has been derived from men's football and there are obvious issues with this. Physical performance is dependent on many variables, particularly the conditions under which players train and perform in. This may include access to facilities (e.g. pitches, gym) and support resources (e.g. sport science, nutrition), and the level to which women's footballers can access these varies considerably. Many may only begin strength training once they become professional – which can affect training age and physical reserve, all of which can determine injury risk.

Fatigue, mood and sleep are some of the psychological factors that may affect workload outcomes. The growing profile of women's football means that players face greater social media pressures, and some will be better equipped to deal with this than others (e.g. through coping mechanisms and social support). Women's footballers tend to have shorter and less lucrative contracts than their male counterparts, and this may drive risk-taking behaviours such as not disclosing injury or a premature return to play after injury – increasing the risk of recurrence.

In summary, there are many contextual considerations which can influence workload outcomes in women's football. These considerations must be carefully examined independently, but also in context and in understanding in terms of their relation to each other and overall holistic impact. Through advancing the conditions of female footballers (e.g. access to facilities, contract duration) and the improvement of communication across the game (e.g. amongst practitioners, technical staff, governing bodies and media/broadcast), higher health and performance standards will be achieved. Inevitably, this will lead to a better experience for all stakeholders including players, fans and governing bodies.

BIOGRAPHY

Dr Sean Carmody is a medical doctor at Chelsea Football Club. He holds a Masters in Sporting Directorship from the Manchester Metropolitan University as well as a Masters in Exercise and Sports Medicine (Football) from the University of Birmingham. Sean has several peer-reviewed publications in the field of football medicine, including papers on mental health, the retired footballer and training load monitoring. Prior to working at Chelsea FC, Sean spent three seasons working with the first team and Academy at Queens Park Rangers FC and is Senior Editor for Football Medicine & Performance and Secretary for the Football Association Medical Society (FAMS).



05

PLAYER IMPACT CALENDAR INCONSISTENCIES AND MATCH TYPE

The COVID-19 disruption of 2020 put long-standing issues in women's football into the spotlight once again. Inconsistent and imbalanced match calendars mean that for many players congested, heavy workload phases are alternating with long periods of limited playing opportunities. In this chapter this phenomenon is showcased through the examples of selected players in major leagues, measured with the help of 'critical zone' workload indicators.





NWSL / CRYSTAL DUNN



Number of critical zone appearances by month (2019-2021)

- Between 2019 and 2021, Crystal Dunn played 89 matches, 48 (54%) with the USA national team and 41 (46%) at club level (22 with North Carolina Courage and 19 with Portland Thorns).
- Her case is special in the sense that she is one of the few players who played more minutes with the national team than with their clubs. Dunn had 3,974 minutes in the USWNT over the analysed period, one of the highest figures.
- Within the sample, Dunn recorded the highest percentage of appearances and minutes played in the critical zone, 52% and 53% of the total respectively, equating to 46 matches and 3,818 minutes.
- Her calendar was quite unbalanced, as there are very congested months with matches played in the critical zone, alternating with periods of next to no matches.
- September 2019 and the summer of 2021 were the periods with the highest number of matches played in the critical zone. The latter was spent almost entirely with the national team and involved pre-tournament friendlies, as well as the Tokyo Olympic Games. She returned to her club shortly after the Olympics and played ten matches in just 57 days.
- Dunn played 54% of her total matches for her national team, a much higher percentage than the other players featured in this section.



FA WOMEN'S SUPER LEAGUE

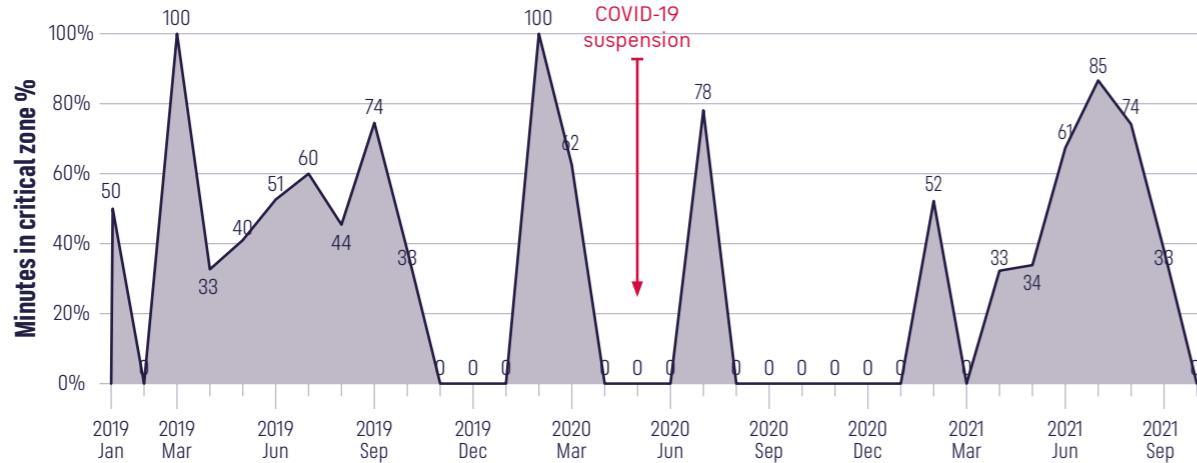
MAGDALENA ERIKSSON



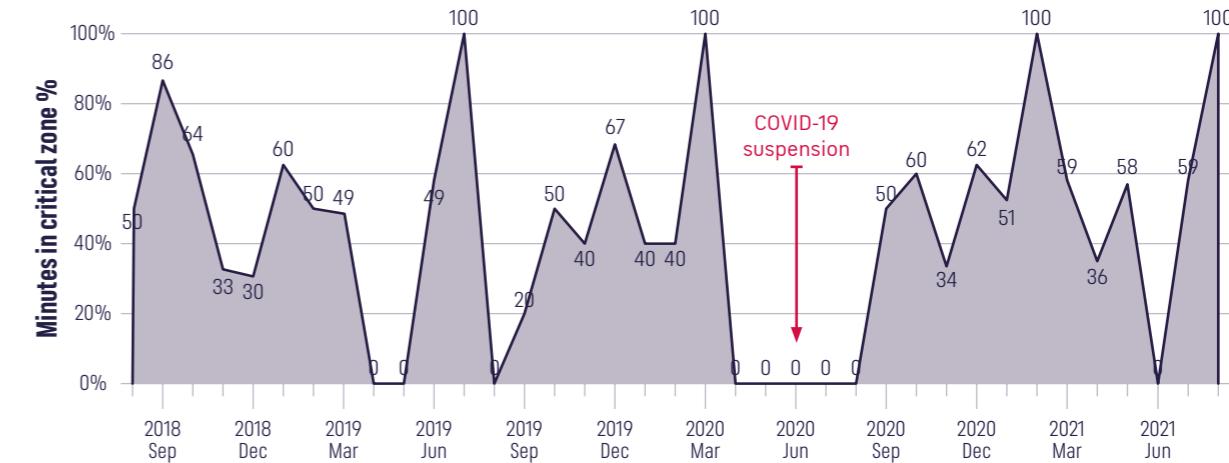
Number of critical zone appearances by month (2018-2021)

- Over the analysed period Magdalena Eriksson played for Chelsea FC and Sweden's national team, totalling 131 appearances and almost 12,000 minutes across three seasons.
- She played 66 matches in the critical zone, meaning 50% of her total matches played. This corresponds to 6,148 minutes in three years, which is an unusually high figure comparatively for top women's football players.
- The beginning of the 2018/19 season represented the busiest period for her: in September 2018 she played six matches in the critical zone over several different competitions (e.g. league, qualifiers, UEFA Women's Champions League).
- However, this high number of matches played in the critical zone in a single month represents an outlier figure that was never reached again in the analysed timeframe.
- Eriksson played 29% of her total matches for her national team.

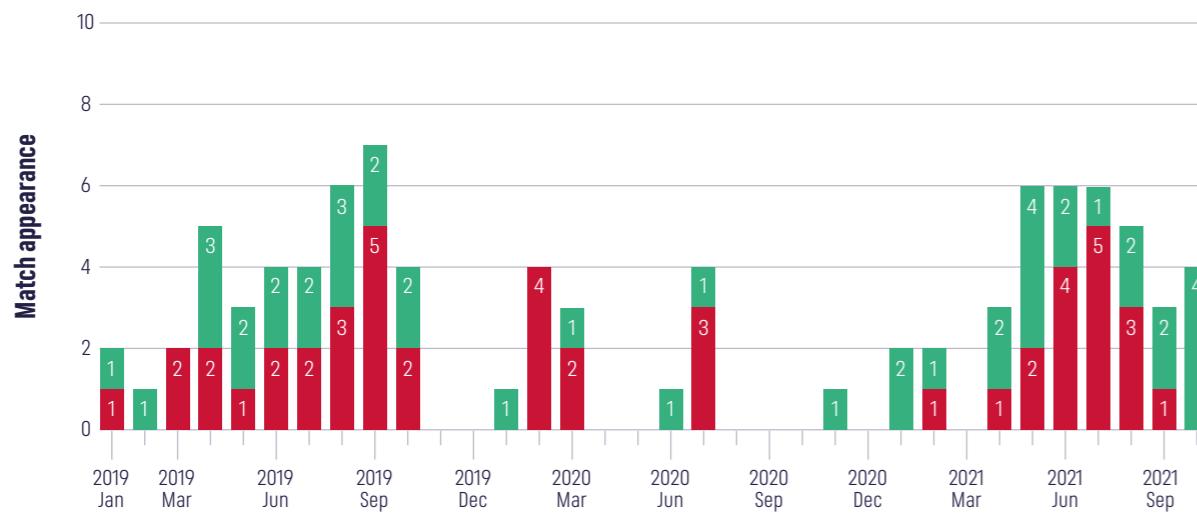
Critical zone minutes % by month (2019-2021)



Critical zone minutes % by month (2018-2021)



Number of critical zone appearances by month (2019-2021)

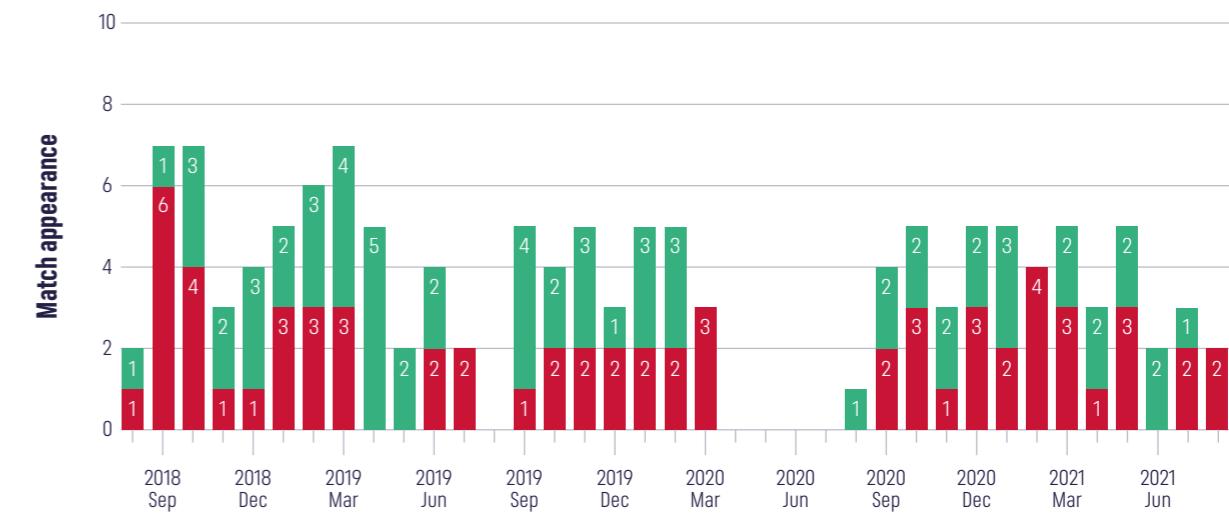


Number of appearances in the critical zone by month

Number of appearances outside the critical zone by month

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

Number of critical zone appearances by month (2018-2021)



Number of appearances in the critical zone by month

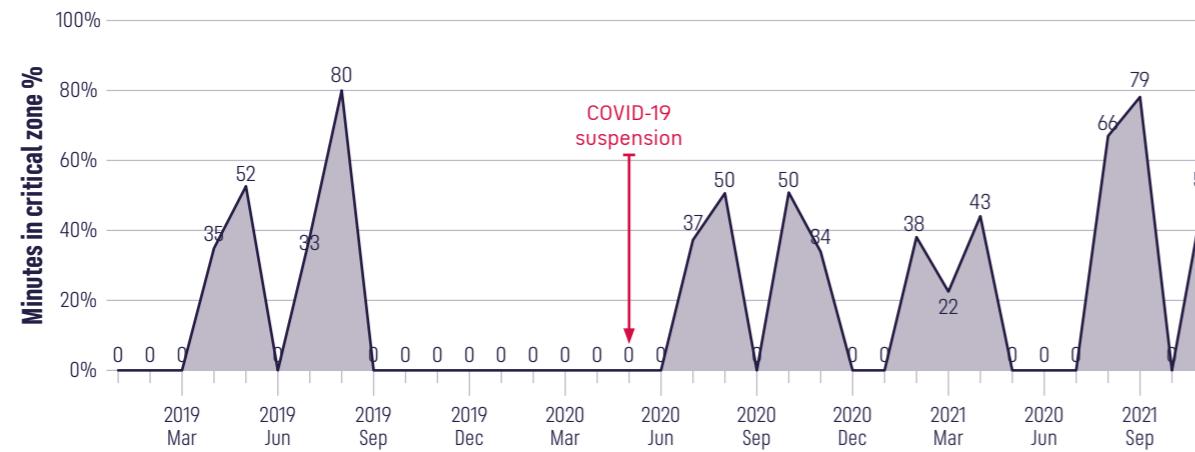
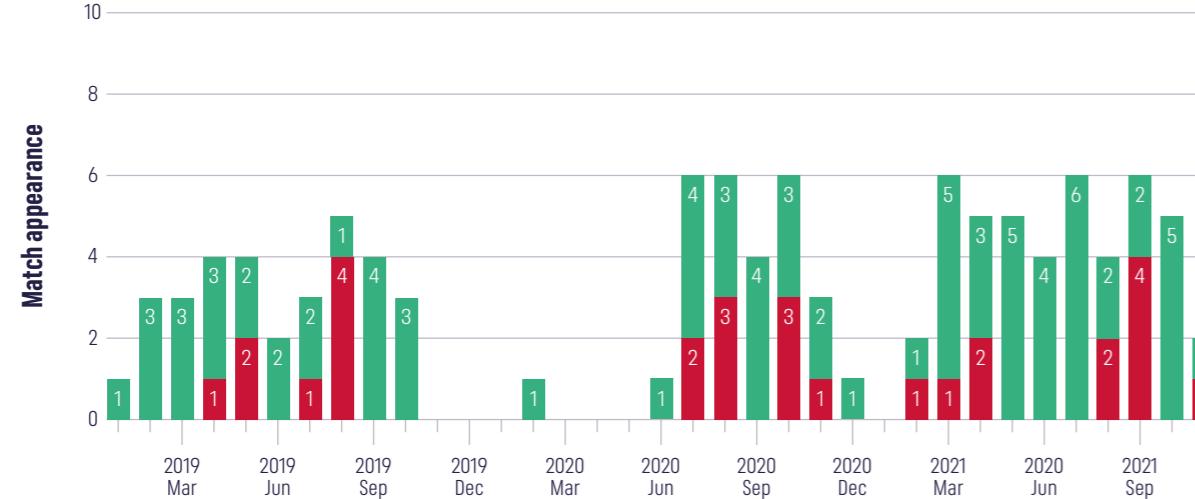
Number of appearances outside the critical zone by month

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis


DAMALLSVENSKAN
OLIVIA SCHOUGH

Number of critical zone appearances by month (2019-2021)

- Olivia Schough played for two Damallsvenskan clubs during the period: Djurgårdens IF, in 2019 and 2020, and FC Rosengård in 2021. In addition to the 80 matches played in total at club level, she also played 25 matches for the Swedish national team.
- July to September were her busiest months in most seasons, which is generally the peak period of the Swedish top tier.
- Notably though, she played only one match between November 2019 and May 2020, against AIK, in the Svenska Cupen Damer. Domestic competitions were suspended shortly afterwards due to the pandemic.
- A key feature of her calendar is the relative lack of critical zone appearances, indicating that she almost always had at least five days of break between matches. In truth, the breaks usually lasted far longer, which can contribute to underload.
- Schough played 24% of her total matches for her national team.

Critical zone minutes % by month (2019-2021)

Number of critical zone appearances by month (2019-2021)

● Number of appearances in the critical zone by month

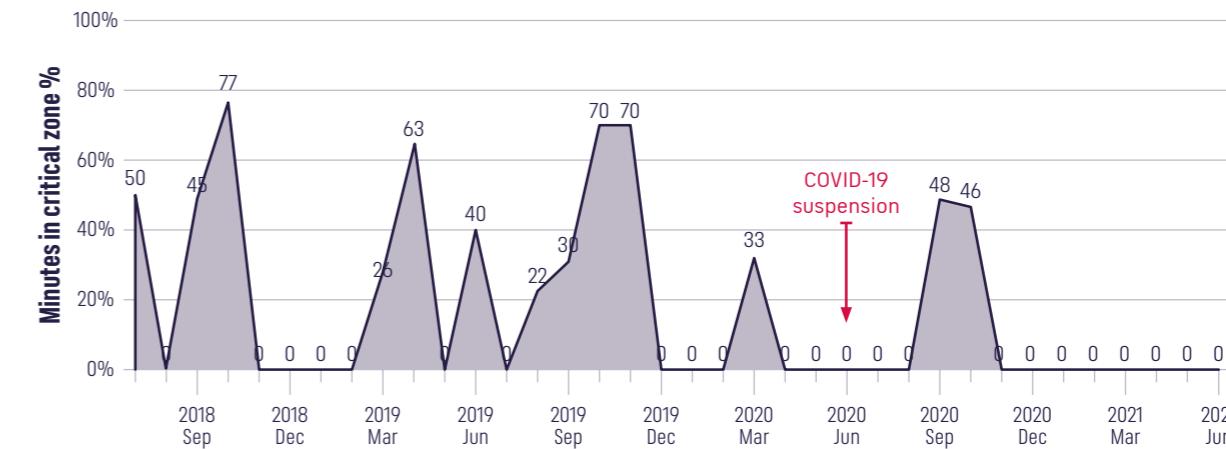
● Number of appearances outside the critical zone by month

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis


DIVISION 1 FÉMININE
EUGENIE LE SOMMER

Number of critical zone appearances by month (2018-2021)

- During the period, Eugenie Le Sommer played for Olympique Lyonnais in France. She signed for OL Reign in the NWSL on loan for the 2021 season, but our analysis focuses only on her time spent in the French league.
- Over the past three seasons she accumulated 99 appearances (7,400 minutes), of which 33% were played in the critical zone.
- The first half of the 2018/19 and the 2019/20 seasons represent her busiest periods.
- The 2018/19 season started with two matches in the Women's International Champions Cup played in June 2018, against Manchester City and North Carolina Courage, followed by a Division 1 Féminine's match played in August 2018, before the seven matches played in September (a national team friendly, the domestic league and UEFA Women's Champions League).
- During the 2019/20 season, October was the month with more matches played in the critical zone (five out of seven). In contrast, in the 2020/21 season the number of critical zone appearances were very limited.
- Le Sommer played 22% of her total matches for her national team.

Critical zone minutes % by month (2018-2021)

Number of critical zone appearances by month (2018-2021)

● Number of appearances in the critical zone by month

● Number of appearances outside the critical zone by month

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

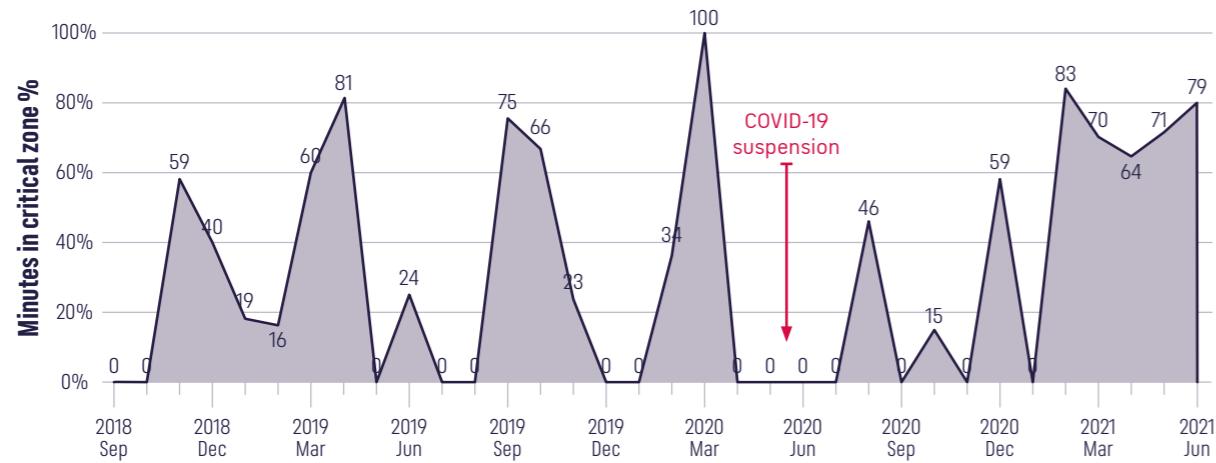


PRIMERA DIVISIÓN FEMENINA / ALEXIA PUTELLAS

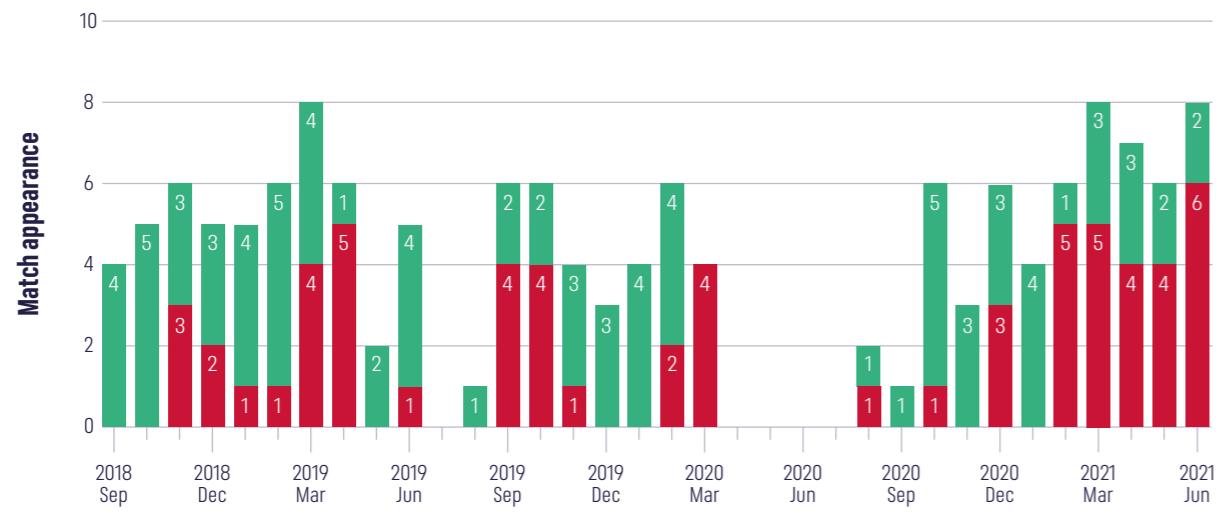
Number of critical zone appearances by month (2018-2021)

- Recent Ballon d'Or winner, Alexia Putellas is one of the key players for FC Barcelona and the Spanish national team, particularly in recent seasons such as 2020/21 Blaugrana treble season. She is the player with the highest number of total appearances within the sample (143).
- She played 61 matches in the critical zone in the past three seasons (43% of the total), accumulating more than 5,076 minutes in the critical zone (46% of the total).
- The second part of the 2020/21 season was the busiest period for her, mainly because of the successful campaign of FC Barcelona in all club competitions and the national team commitments, including UEFA Women's European Championship Qualifiers and friendlies.
- More specifically, she played five matches in the critical zone in February and March 2021, four in April and May and six out of the eight matches played in total in June 2021.
- She played 20% of her matches for the Spanish national team between June 2018 and June 2021.

Critical zone minutes % by month (2018-2021)



Number of critical zone appearances by month (2018-2021)



Number of appearances in the critical zone by month

Number of appearances outside the critical zone by month

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

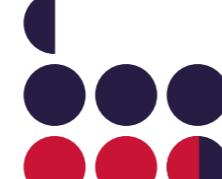
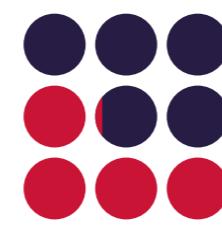
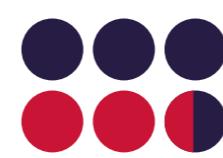
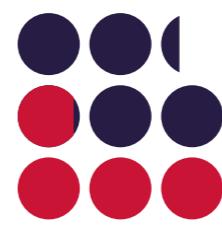


ANALYSIS BY PLAYER PROFILE

CRITICAL ZONE - WHAT TYPE OF PLAYERS HAVE HAD THE HIGHEST WORKLOAD?

Not all players analysed within the PWM platform had the same match calendar, or rhythm to their season.

We analysed the player sample and found three distinct player profiles:

Profile	Minutes and critical zone % of an average player in the playing group (profile)	Key findings
DOMESTIC PLAYING GROUP (PLAYERS MOSTLY EXPOSED TO DOMESTIC WORKLOAD): players whose match schedule is mostly made up of domestic games; those in this category played a maximum of four national team or international club competition matches within the same season combined.	 <p>2018/19 2,445 minutes on pitch, of which 721 minutes in critical zone (~7.6 full matches)</p>  <p>29.5% of all minutes played in the critical zone</p> <p>2019/20 1,408 minutes on pitch, of which 383 minutes in critical zone (~4.0 full matches)</p>  <p>27.2% of all minutes played in the critical zone</p> <p>2020/21 1,655 minutes on pitch, of which 414 minutes in critical zone (~4.4 full matches)</p>  <p>25.0% of all minutes played in the critical zone</p>	<ul style="list-style-type: none"> The average minutes in critical zone per player significantly decreased during the COVID-affected 19/20 season with a slight recovery during the 2020/21 season. The share of such on-pitch minutes decreased season by season since these players rarely had any international match commitments, their heavy workload matches were more spread out during the course of a season.
INTERNATIONAL PLAYING GROUP (PLAYERS FREQUENTLY PLAYING INTERNATIONAL COMPETITIONS): players who in addition to their domestic competition duties played at least fifteen national or international club matches in the same season. These players are mostly key members of their respective clubs and/or are regulars in their country's national team setup.	 <p>2018/19 3,250 minutes on pitch, of which 1,273 minutes in critical zone (~13.4 full matches)</p>  <p>39.2% of all minutes played in the critical zone</p> <p>2019/20 2,739 minutes on pitch, of which 1,101 minutes in critical zone (~11.6 full matches)</p>  <p>40.2% of all minutes played in the critical zone</p> <p>2020/21 3,194 minutes on pitch, of which 1,279 minutes in critical zone (~13.5 full matches)</p>  <p>40.1% of all minutes played in the critical zone</p>	<ul style="list-style-type: none"> Number of minutes played in the critical zone has been consistent for this group, generally between 1,100 and 1,300 minutes per season. In the COVID-affected 2019/20 season, due to tighter schedule as a result of the postponements in many leagues, the share of critical zone minutes increased slightly, but remained at similar level for the 2020/21 season.
HIGHEST WORKLOAD PLAYING GROUP (PLAYERS WITH THE MOST MINUTES PLAYED): the ten players in the PWM platform with the most minutes played across all competitions in a season. Players with this profile generally make it far in international competitions (e.g. Dzsenifer Marozsan), play a lot of national team games (e.g. Magdalena Eriksson) and almost always play for their teams (e.g. María León). They are international players at the very top of the professional game.	 <p>2018/19 4,536 minutes on pitch, of which 2,050 minutes in critical zone (~21.6 full matches)</p>  <p>45.2% of all minutes played in the critical zone</p> <p>2019/20 3,056 minutes on pitch, of which 1,242 minutes in critical zone (~13.1 full matches)</p>  <p>40.6% of all minutes played in the critical zone</p> <p>2020/21 4,169 minutes on pitch, of which 1,940 minutes in critical zone (~20.4 full matches)</p>  <p>46.5% of all minutes played in the critical zone</p>	<ul style="list-style-type: none"> A higher level of critical zone minutes than other groups, around 2,000 in a "normal", uninterrupted season. Around 20 appearances thus fall into the critical zone for top players. However, could they play even more? Evidence shows that these appearances are fundamental in terms of conditioning and player development. When properly spread across the calendar, intense and high workload periods can be beneficial and help them reach their full potential on the pitch. The share of critical zone minutes decreased significantly from 18/19 to 19/20, but bounced back during the 20/21 season reaching the highest share during the period under review.

PLAYER UNDERLOAD

WHAT IS IT AND WHY DOES IT OCCUR?

Underload and significant breaks in play are two key issues affecting women's football that should be centralised in discussions about the future of the game. With international club competitions still in their infancy in most parts of the world, underload prevails from a lack of such additional competitions to supplement league play, as well as a lack of coherent scheduling, a smaller pool of players and subsequently teams. At the same time, long breaks are observed even in several top leagues around the world, with some extreme individual cases.

WHAT IS BEHIND UNDERLOAD?

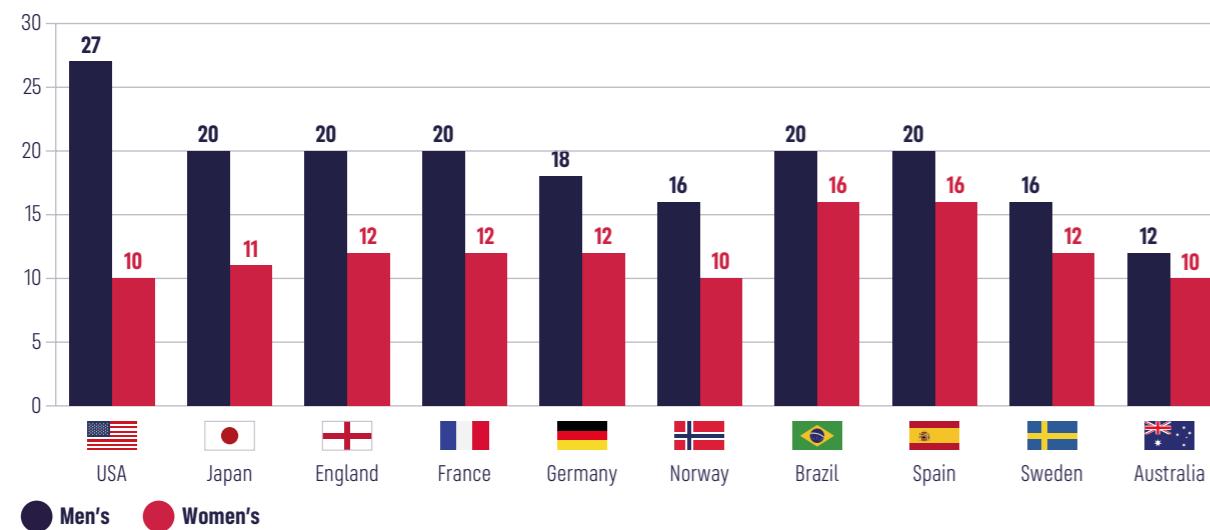
The evidence presented in this report shows that female football players generally have fewer competitive playing opportunities, even at the top of the game. This ultimately results in fewer opportunities for professional development and potentially lower chances to peak physically and mitigate injury. We have identified the following main reasons for underload as follows:

- Fewer teams per league than what is typically found in the equivalent competition in men's club football;
- Shorter seasons and longer breaks in play;
- Schedule imbalance;
- Lack of prominent and competitive international competitions;
- Unbalanced distribution of matches between elite leagues/clubs and the lower levels of the football pyramid;

- Shorter formats in place for some leagues and international competitions, and generally fewer competitions all round;
- There is a lack of stable employment opportunities for players, with fewer professional leagues in women's football than in men's football. It should also be noted that the development path to "professional and/or elite" football is vastly different between genders;
- Historic and embedded discrimination, which affects the overall development and trajectory of the leagues, player opportunities, professionalisation, and subsequently the industry as a whole.

For context, the chart below provides a comparison of the number of teams taking part in the top divisions of men's and women's football leagues in ten selected countries with an established football infrastructure.

Number of teams in top competition by country and gender



Note: the number of first-division clubs refers to the 2020/21 or 2021 seasons.

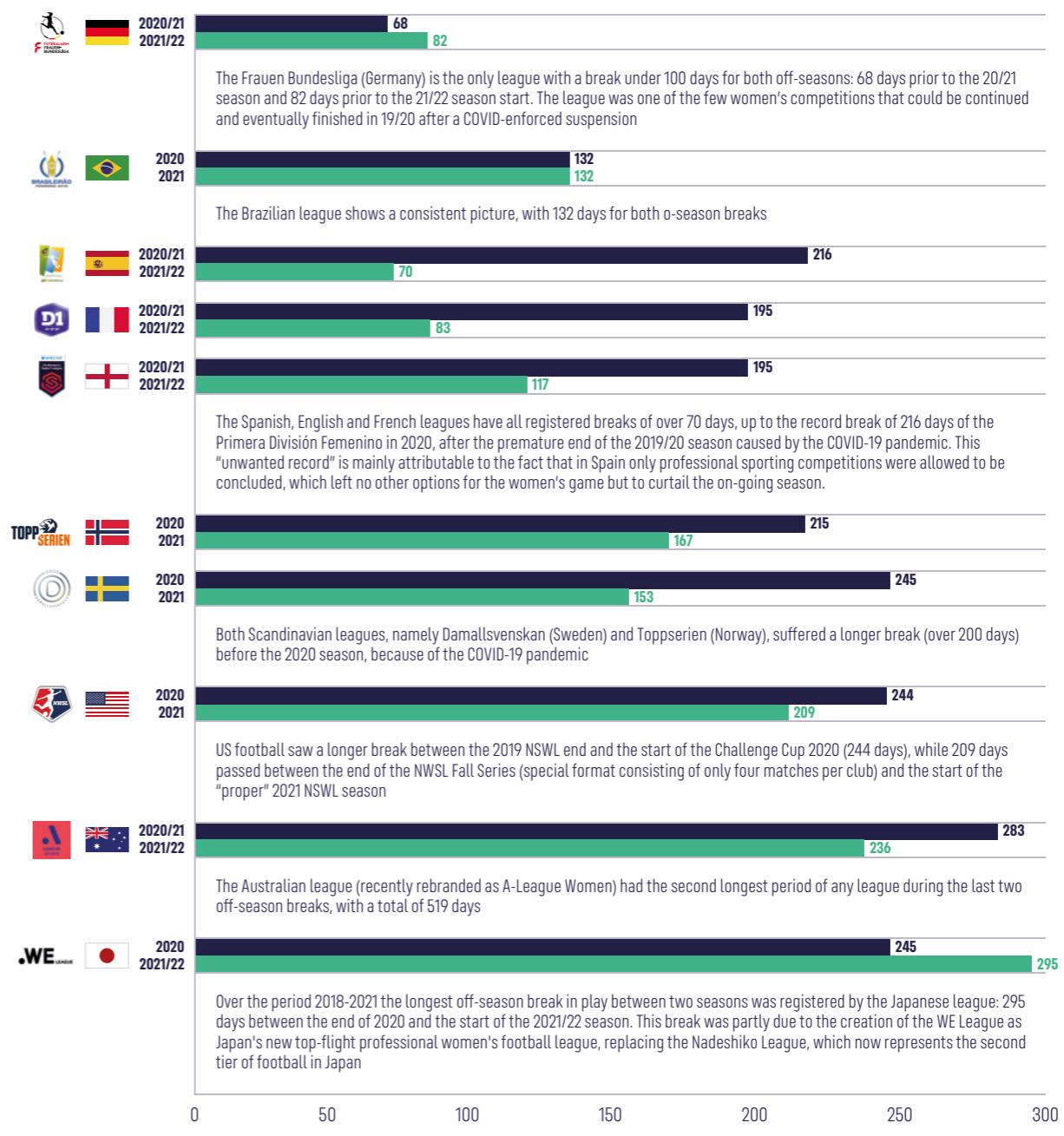
Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

LONG SEASON BREAKS (IN PLAY)

In addition to a lack of competitive games and long periods between matches, the total lack of games played are evidenced here as another form of "underload". Regularly scheduled breaks in every competition and these are important to leave enough time for players to rest, recover and get ready for upcoming challenges. However, in women's football globally we see an issue that has been long in the centre of discussions: some breaks are simply too long and scheduling simply too inconsistent.

In this section a selection of top women's (domestic) leagues are analysed from an off-season break perspective, also covering the COVID-19 impact. This selection exemplifies how underload and an imbalanced scheduling of games means substantial breaks in play and a lack of games are considered the norm despite COVID-19. Accompanying the visualisation of this in the following graphic, we have observed the following trends around the world:

Off season break day across top leagues (last two seasons)



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

06

PLAYER IMPACT COMPETITION

A key element in analysing player workload in football is competition. Where players find their competitive opportunities, and the conditions that govern those competitions help frame an understanding of the history and, importantly, the potential future trajectory of the industry.

Currently, almost all Confederations are working on prospective competition reforms, signalling potentially exciting new times in women's football. While some of them have already introduced new formats or tournaments, others are still in the planning phase. Through increased number of games and addressing the scheduling imbalances, players would have more opportunity to play consistently, meaning two of the key issues identified within this report could be challenged and resolved.

In this section, we look at the different elements of competition development around the world. The chapter focuses on the importance of competitive and national team minutes, as well as a detailed overview of recent and upcoming competitions changes. We have two players in focus to provide examples of how much variance there is between different Confederations and competitive environments.





CONCACAF & CONMEBOL

DEBINHA



Attacking Midfielder

During the analysed period Debinha played in multiple competitions for both club and country. Due to the lack of continental competitions at club level outside of Europe, she mostly played in domestic as well as national team matches. For Brazil she played in the FIFA Women's World Cup 2019 and the 2021 Tokyo Olympics, as well.

Analysed match period: 27th February 2019 – 7th November 2021

MATCH WORKLOAD

90
match appearances

85.0

minutes per appearance

7,649
minutes played in total

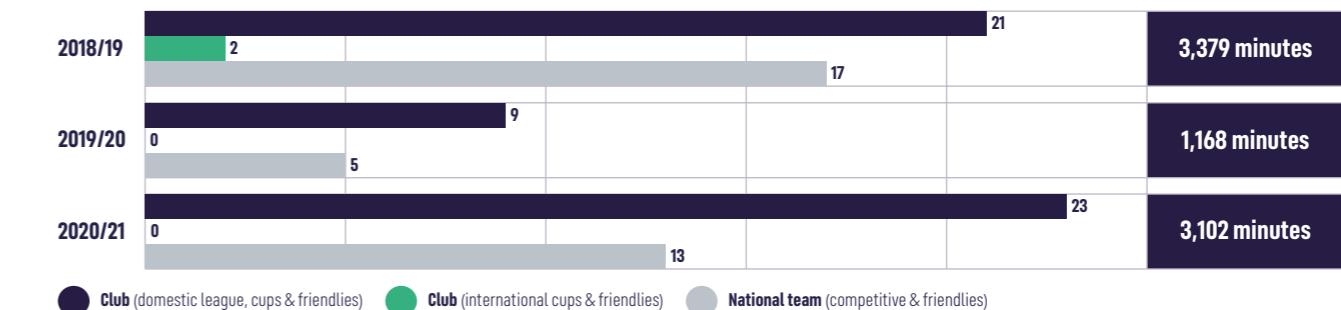
CRITICAL ZONE



- Debinha joined North Carolina Courage in 2017, appearing in every regular season game for the Courage that year and winning two national titles in a row in the following two seasons.
- During the 2019 season she played a total of 40 matches: 21 in club's domestic competitions, 17 for the Brazilian national team (including the FIFA Women's World Cup 2019) and two in international club competitions (Women's International Champions Cup).
- Considering the absence of a continental competition at club level in the CONCACAF association, national team matches represent a high percentage of her overall total playing opportunities during the monitored period – 39% in total.
- The 2020 season was highly impacted by the COVID-19 suspension (109 days) that occurred at the start of the season. Debinha played only 14 matches in total: nine with her club (NWSL Challenge Cup and NWSL Fall Series) and five with the national team (Tournoi de France and other friendlies).
- National teams' matches played a crucial role also in the latest season, thanks to the participation of Brazil to the Olympic Games, where Debinha played four matches.

APPEARANCES BY MATCH TYPE

Only two international matches at club level over the past three years.



● Club (domestic league, cups & friendlies) ● Club (international cups & friendlies) ● National team (competitive & friendlies)

TRAVEL COMMITMENTS

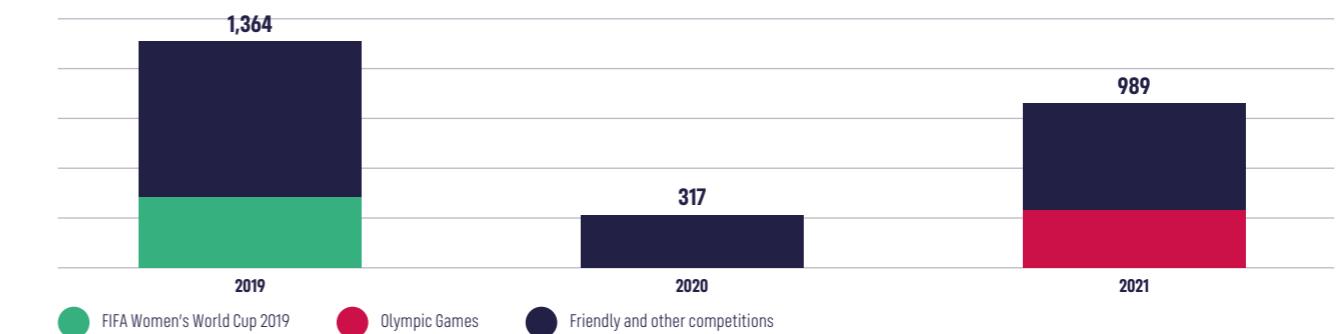


201,358 kilometres in total.
Travelling 5.0 times the length of the Equator.

Approx. 11 days spent travelling and
128 time zones crossed.

BREAKDOWN OF NATIONAL TEAM MINUTES PLAYED

Debinha has played both the FIFA Women's World Cup in 2019 and the Olympic Games in 2021.



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

TIMELINE OF THE PERIOD UNDER ANALYSIS

Excluding three matches played in six days at the beginning of March 2020, Debinha has spent 189 days without playing between December 2019 and June 2020.

% of total break days (off-season and COVID suspension) **27%**

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis



UEFA WENDIE RENARD

Central Defender

Renard - when available for selection - hardly missed any minutes for club and country over the past three seasons as she accumulated 106 appearances. She is an important member of OL's and France's defence. Due to her club's historic performances in the UEFA Women's Champions League and her consistency, Renard currently holds the record for most appearances in the competition.

Analysed match period: 27th July 2018 – 10th June 2021

MATCH WORKLOAD

106
match appearances

94.5
minutes per appearance

10,016
minutes played in total

CRITICAL ZONE

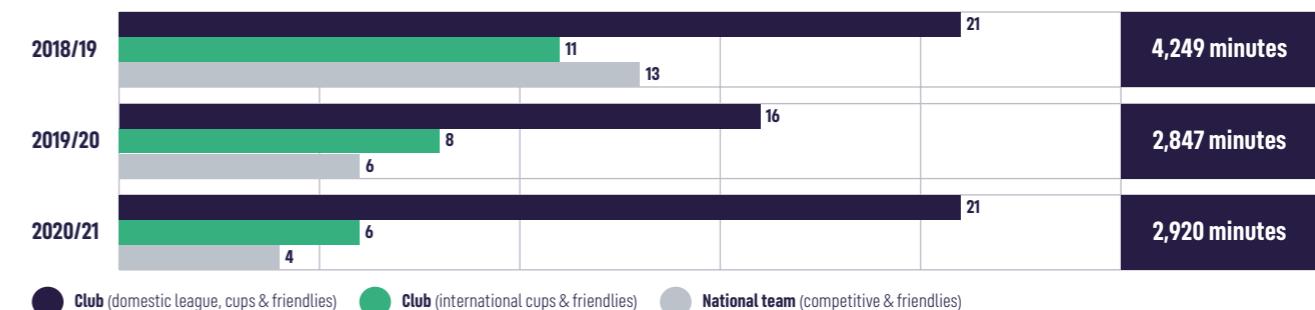
35.9%
of all minutes played
in critical zone



- Wendie Renard is the current captain of OL, the French club she joined in 2006 and has recorded more than 400 appearances for the team.
- She is one of the players with the highest number of minutes played in international competitions at club level over the past three years in the PWM sample (similarly to her former teammate, Lucy Bronze). International club matches provide another quality playing opportunity, which can greatly benefit the development of a player.
- She is also a key player for the French national team, having taken part in the FIFA World Cup in 2019, playing all of France's five matches until their elimination in the quarterfinals against the United States.
- In all three seasons under analysis she played on average more than 90 minutes per match (overall average 94 minutes per match). She has been substituted off only four times in three years and only once before the 75th minute.

APPEARANCES BY MATCH TYPE

Renard played a total of 48 matches at international level: 25 with the club and 23 with the national team. This is one of the highest international workload in the PWM sample.



TRAVEL COMMITMENTS

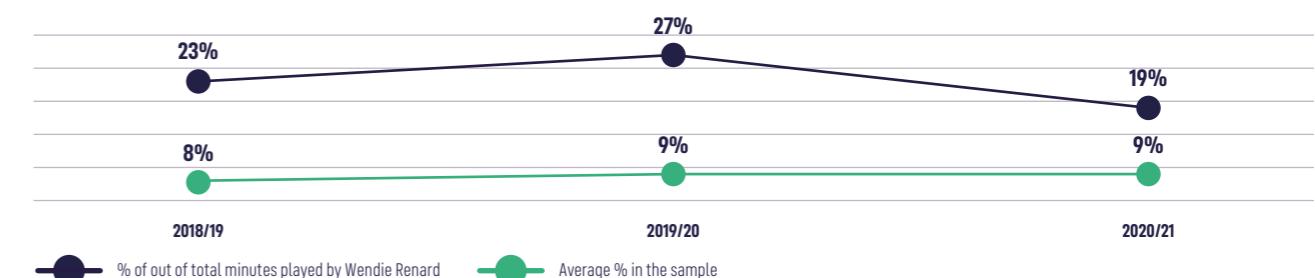


66,686 kilometres in total.
Travelling **1.7 times** the length of the Equator.

Approx. 4 days spent travelling and
40 time zones crossed.

MINUTES PLAYED IN CLUB INTERNATIONAL MATCHES

Over the past three seasons, 23% of the minutes played by Wendie Renard were in international club matches, much higher than for an average player in the PWM sample (only 9% of minutes recorded in international club games).



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

TIMELINE OF THE PERIOD UNDER ANALYSIS

After the cancellation of the 2019/20 French league and the forced COVID suspension of 155 days, Wendie Renard played five matches in 21 days, three of which were 2019/20 UEFA Women's Champions League matches.

% of total break days (off-season and COVID suspension) 20%

27 Jul 2018

2018/19
337 days / 45 matches



Off-season break
48 days

15 Aug 2019

2019/20 before COVID
205 days / 26 matches



COVID suspension
155 days

Off-season break 7 days

6 Sep 2020

2020/21
277 days / 30 matches

10 Jun 2021



2019/20 after COVID 21 days / 5 matches

PREVALENCE OF NON-COMPETITIVE GAMES

Our first task is to identify what type of matches elite players are generally involved in. Any reforms must consider the balance between domestic, international, competitive, and friendlies (or "exhibition" matches) - both from a growth and opportunity perspective. But what does the landscape exactly look like today?

COMPETITION TYPES

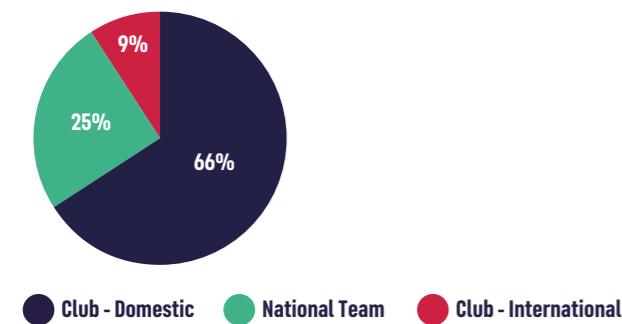
- On an aggregate level, it is not surprising to see that domestic club matches are still the most important source of playing time for players (two-thirds of all minutes).
- However, notably approximately 26% of their minutes came in national team competitions when looking at the 85-player PWM sample. It must be said that this is more due to the lack of club games than due to the abundance of national team tournaments. International games - either friendlies or competitive matches - represent a higher share of a top player's calendar in women's football than in men's, where the average is around 14%.

- Within the PWM sample, six players played more minutes with the national team than with their clubs during the analysed period. Tellingly, all of them are based in the CONCACAF region, which is often characterized by short club seasons and a lack of continental club matches. This finding exemplifies how underload is highly prevalent, the need for a more balanced schedule and a well-considered implementation of both.
- However, this is definitely not just a regional problem as the scarcity of international women's club competitions is apparent in most parts of the world. The data demonstrates that the share of minutes played in such competitions at club level is only 9% for an average top player.

turnover of competitive, albeit friendly, tournaments and games. Overall, for professional women's football to continue on an upwards trajectory, players require more, consistent game time that prioritizes competitive quality, conditions, scheduling and remunerative opportunities for a greater number of players globally

- National teams also play friendly international tournaments, providing further playing opportunities to the players. These include, but are not limited to:
 - She Believes Cup (USA)
 - Algarve Cup (Portugal)
 - Aisha Buhari Cup (Nigeria)
 - Cyprus Women's Cup
 - FFA Cup of Nations (Australia)
 - Four Nations Tournament (China)
 - Pinatar Cup (Spain)
 - Torneio Internacional Feminino de Seleções (Brazil)
 - Tournoi de France
 - Turkish Women's Cup
 - Yongchuan Tournament (China)
 - The Pan American Games
 - The Women's Asian Games
 - Announced new four-team international tournament in England (February 2022)
- In the current landscape these matches represent important competitive opportunities but can be precarious year-to-year when not linked to a more established competition, or competition organiser. For example, competitions like the FFA Cup of Nations are "one-off" tournaments that are not repeated in subsequent years. They are also invitational which means that the competing teams (outside of the hosts) often change year to year, adding to the inconsistency of competitive opportunities available to national teams around the world
- The chart below shows the players that played the highest % of minutes in "unofficial", non-competitive matches within the sample:
 - Rosie White: 42% (974 minutes)
 - Christen Press: 37% (1,990 minutes)
 - Julie Ertz: 38% (2,355 minutes)
 - Crystal Dunn: 33% (2,390 minutes)
 - Abby Dahlkemper: 32% (2,744 minutes)

Breakdown of all minutes played by women's players in the PWM sample (2018-2021)



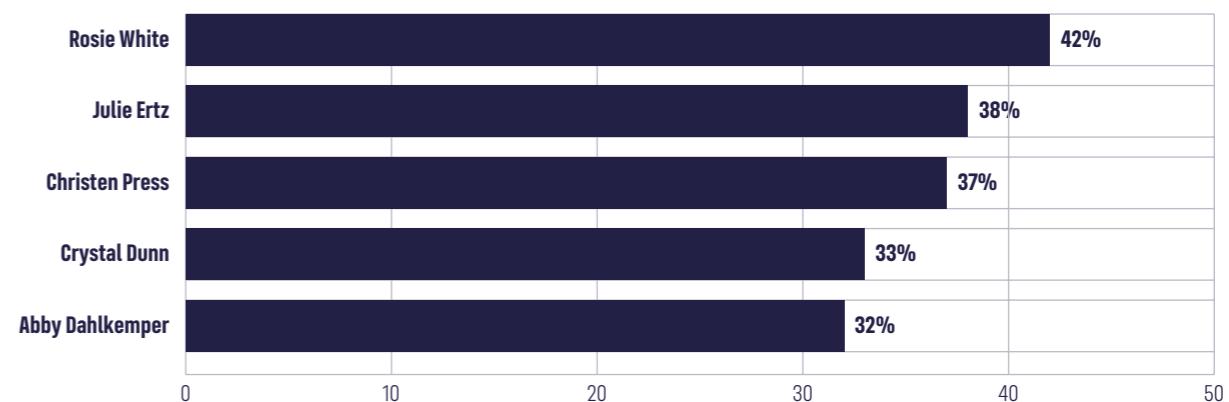
Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

FRIENDLY VS COMPETITIVE GAMES

- Women's teams often play friendly games and/or tournaments that are not linked to long-standing, internationally-recognised competitions. In the club environment a prime example is the Women's International Champions Cup, a 4-team event played in 2021 that featured the winners of the UWCL, Barcelona, the latest two winners of the NWSL Challenge Cup, Portland Thorns FC and Houston Dash, and France's Olympique Lyonnais. Understanding the why behind the number of friendly games is key to the overall understanding of the history and potential

trajectory of professional women's football. The underload of women's professional footballers is one of the most pressing issues in the sport today. Underload is exacerbated by lack of high-quality international club tournaments, the low number of professional teams, smaller pool of players and the long breaks between seasons in most parts of the world. A vacuum of centralised competition managements in this space compounds underload, meaning leagues and/or other private entities are putting on their own competitions to enable a greater

Extreme examples of the high share of minutes played in non-competitive matches (2018-2021)



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

- All the above players play/have played for a club competing in the CONCACAF region in the period under analysis. This data confirms the current limitations of competitive playing opportunities in that region due to the absence of international club competitions for Confederations club teams.

RECENT AND UPCOMING COMPETITION CHANGES

There are fewer competitively organised playing opportunities in women's football compared to men's football, even at the very top of the game. In particular, women have a smaller chance to play a substantial number of international matches at a higher level, especially in a club setting.

What is being planned to combat this issue and what changes are expected in the future? In this section we provide an overview of international competitions in the six major confederations.

Currently, only two confederations (UEFA and CONMEBOL) have an established international club competition in place, while CAF and AFC have only recently announced the creation of a similar tournament. A clear evidence of this is that in our sample of top players, 31 out of 85 (36%) did not play in any international game at club level. The situation is slightly better though at the national team level as all confederations organize an established continental competition.





UEFA (EUROPE)

The predecessor of the **UEFA Women's Champions League** (UWCL) was first played in the 2001/02 season. In 2009 it was rebranded to the current Champions League name and underwent a major format change in which the number of games increased from 68 to 103.

From the 2021/22 season onwards a new format has been introduced which is more similar to the men's equivalent as the competition now includes a group stage for the very first time. The group stage comprises of 16 participating clubs while - considering also the qualifying phase - 72 clubs from 50 associations in total are involved in some capacity in total. This is a not insignificant improvement in volume compared to previous years, but there would still be scope for an expansion.

The introduction of a group stage aims to address the imbalance in European women's football, helping smaller clubs to gain international experience: each qualified club is guaranteed to play at least six games. In addition, the calendar is now similar to the men's Champions League, as the group stage will take place between October and December and the knockout phase starts in March.

The European competition for the national teams, the **UEFA European Women's Championship** is held every four years and involves 16 teams (only 12 until the 2013 edition). The next one was originally scheduled to take place in summer 2021 but as a knock-on effect of COVID-19, it is now expected to take place in July 2022 in England. The format includes a group stage and a knockout phase, starting from the quarter-finals, meaning that participants will play somewhere between three and six games.



CONMEBOL (SOUTH AMERICA)

In South America, the **CONMEBOL Libertadores Femenina** was launched in 2009, with the first two editions being played with only 10 participating clubs. The tournament was eventually expanded to include more teams and has been contested by 16 clubs since 2019.

For the group stage, the 16 teams are drawn into four groups. Teams in each group play one another in a round-robin basis, with the top two teams of each group advancing to the quarter-finals, where the teams play a single-elimination tournament.

In order to help the development of the women's game, 2019 also marked a significant policy change: clubs are now denied entry into the men's Libertadores if they do not also operate a women's team. The 2020 CONMEBOL Libertadores Femenina was supposed to be held from September to late October 2020, but it was postponed due to COVID-19 and eventually completed in March 2021. The next edition is currently scheduled to kick-off in November 2021 in Paraguay and Uruguay.

The **Copa América Femenina** is the main competition in women's association football between national teams of the CONMEBOL. In the first two editions of the tournament, 1991 and 1995, there were only three and five participants respectively, while since 1998 there are 10 teams taking part in the final competition held every four years until the next edition in 2022, before the announced change to a biennial schedule. In the first stage the teams are divided into two groups of five; then, the top two teams of each group and the best third-placed advance to the final stage, where all the teams play one another in a round-robin basis.



CAF (AFRICA)

The creation of the **CAF Women's Champions League** was approved at the CAF Executive Meeting in June 2020, with the first edition scheduled for 2021 (the final tournament will be hosted by Egypt in November). The format of the first edition will see the champions of each of the six CAF Zones qualifying automatically for the final phase. They are joined by the hosts and an extra team from the zone of the defending champions (or for the first edition, an extra team from the zone of the reigning Africa Women Cup of Nations champions). The eight teams will be then divided into two groups of four. The first two in each group advance to the semi-finals.

At national team level, the **Africa Women Cup of Nations** represents the main competition. Currently it follows a biannual schedule and it involves 12 teams in the final phases. After the cancellation of the 2020 edition due to the pandemic, the tournament will come back in 2022 in Morocco. The annual competition, COSAFA Women's Cup, involving Southern Africa national teams, represents another important playing opportunity at international level for the players in this confederation.



AFC (ASIA)

AFC have also recently launched its first and much-anticipated **international club competition**. After a successful pilot edition organised in and November 2019 with four teams in a round-robin format, the second edition was due to be held in 2020, but it had to be cancelled due to the pandemic. A year later the second edition of AFC Women's Club Championship could be finally organized in November 2021. Although there were plans to add a group stage to the competition format, but once again only four clubs participated in the competition that took place Jordan. However, the confederation is still keen on expanding the competition: there are plans to have 16 clubs playing in it by 2025.

The Asian women's national teams face each other every four years in the **AFC Women's Asian Cup**. The 2022 edition, taking place between January and February, will involve 12 national teams in the final stage (only eight in the previous editions). The final tournament will consist of a group stage, followed by a knockout phase. Problematically this tournament takes place outside of a traditional FIFA window, which means players miss club football as the league schedule does not account for such competitions. This poses drawbacks for players in relation to travel, scheduling club football and future potential club and employment opportunities.



CONCACAF (NORTH, CENTRAL AMERICA AND THE CARIBBEAN)

Currently there are no official international competitions at club level in the CONCACAF area, which covers Northern and Central America, as well as the Caribbean region. In March 2021 CONCACAF announced their plans to launch a continental club competition, but this is unlikely to materialise before the 2023 FIFA Women's World Cup.

Many countries in the Confederation don't have professional women's leagues and even countries that do are still far from the NWSL standards. Therefore the structure of any new competition must be devised smartly to reduce the competitive imbalance from the start (e.g. domination by NWSL clubs) and allow development opportunities for all countries at club level.

In August 2021, CONCACAF revealed the details for its new women's **national team competition**, taking place between 2021 and 2024. The structure will include two major centralised summer tournaments – the CONCACAF W Championship in 2022 and the CONCACAF W Gold Cup in 2024. This new schedule prioritises the provision of more official match dates for all the federations, ensuring there is enough elite competition to showcase the highest level of women's international football in the Confederation. Through these new competitions, CONCACAF will more than double the number of official women's national team matches compared with the previous cycle. The CONCACAF W Championship will be quadrennial and will be contested by eight national teams, while 12 teams will take part in the final stage of the CONCACAF W Gold Cup.



OFC (OCEANIA)

In Oceania, clubs do not play any relevant international competition, while at national team level teams take part in the **OFC Women's Nations Cup** every three years (eight teams in the final phase). At the moment no imminent relevant reforms are under discussions.

CONCLUSIONS

Evidence points to a clearly improving trend in terms of number of matches available for women's teams at international level, at least in certain regions of the world. Indeed, UEFA has almost doubled the number of total matches in the UWCL starting from the current 2021/22 campaign. The CONMEBOL Libertadores Femenina now includes 16 participating clubs (vs 10 in previous format) and more importantly denies participation in the men's competition, through the regulatory and club licensing framework, for those clubs who do not also have a women's team. This highlights the focus placed on the importance of elevating women's club football and how key regulatory intervention can be utilised in this regard. Whilst this progress should be celebrated there are also downsides to this regulatory approach, with professional women's footballers citing less than satisfactory work conditions as a consequence of the denial of participation for men's clubs, or tokenistic inclusion rather than meaningful integration taking place.

However, the development level of (international) women's football is far lower in Africa, Asia or even most parts of Central and Northern America. Opportunities are limited and properly managed, regular competitions are only in the planning phase at the moment.

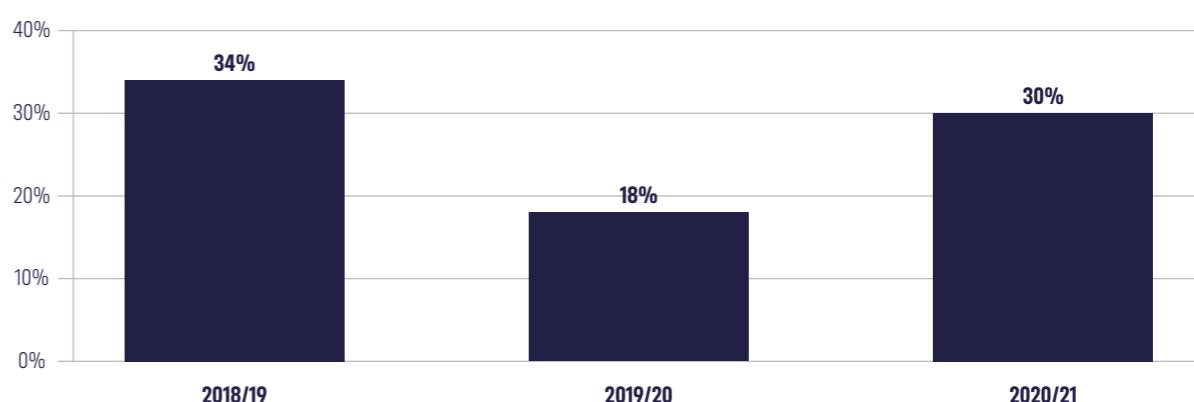
There is space in the overall global calendar for new competition designs and reforms, but any such changes must be collaboratively approached in a way that promotes overall global development: meaning more games for all, not just for the few who already play a relatively large amount. And, even more critically, these matches and competitions must be played in conditions which protect and promote the players and their wellbeing. Without the appropriate accompanying conditions and standards, particularly around investment, renumeration and medical standards, players will be put at risk – particularly when you look at historical inequities and barriers that have plagued women's football in the preceding decades.

NATIONAL TEAM MINUTES

In the current developmental stage of women's football, national teams are still often relied upon as a main source of high-quality matches. Premier tournaments, such as the FIFA Women's World Cup or the Olympic Games, drive visibility, increase participation and elevates the women's game to new levels of recognition – particularly with regards to commercial opportunity and growth.

The next season marked the return of international games (and the Olympic tournament) as the global health situation eventually improved. This meant that the ratio bounced back to 30%. However, this is an average across players mostly playing in Europe or in the US. Footballers representing countries of other regions might not have been as lucky: for example, the New Zealand women's national team did not have any matches between March 2020 and July 2021 (Tokyo Olympics).

The share of national team matches in an average top player's schedule



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

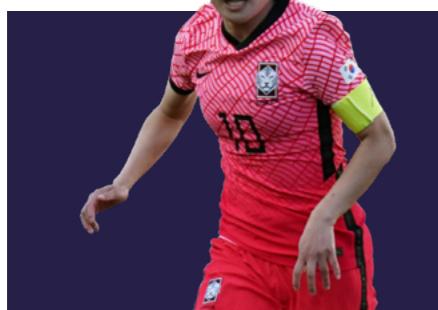
ROAD TO THE WOMEN'S WORLD CUP

FRAGMENTED QUALIFYING PATHWAYS

Having established the importance of the FIFA Women's World Cup (and the Olympic Games) as the undisputed pinnacles of international women's football, in this section the current qualification paths and processes for the World Cup in every confederation are mapped out.

The 2023 FIFA Women's World Cup will be hosted jointly by Australia (AFC) and New Zealand (OFC), thus becoming a first FIFA tournament to be held across multiple confederations. Apart from the host countries, the eligible countries could secure a spot via Confederations championships, qualifying competitions or via inter-continental playoffs. For the first time, 32 teams will compete to be crowned world champions, the largest number of participating teams in the competition's history.

Regarding those Confederations with qualifications via Confederation championships, players could play up to 6 matches, with CONMEBOL being the only exception, where up to 7 matches are needed to be played to earn a berth at the tournament. Crucially, UEFA is the only confederation with a standalone qualifying competition, where teams have to play 12 matches en-route to the World Cup. This competition, in contrast to the rest of the confederations, present a regular opportunity to play competitive national team games over a longer period. Finally, those countries that reached a playoff spot in their respective confederations would be eligible for the inter-continental playoffs, that consist of up to two additional matches depending on the countries' place in the FIFA Women's Word Rankings. This will be played in February 2023, in Australia and New Zealand. This detail is important to understand the fragmented and mismatched approach to qualification for the FIFA Women's World Cup. This evident fragmentation means disjointed and often precarious qualifying conditions for professional women footballers which need to be more robustly examined.


SO-YUN JI
VIA MAJOR TOURNAMENT

Number of qualification matches

5 to 6 matches

Schedule

20/01/22 - 06/02/22

Available spots through: Direct spots: 5 + 1 (Australia), Play-off spots: 2

FIFA WOMEN'S WORLD CUP
AU 20 NZ 23
INTER - CONTINENTAL PLAYOFFS
2
matches

Direct spots: 3

17/02/23 - 23/02/23
LUDMILA DA SILVA

VIA MAJOR TOURNAMENT

Number of qualification matches

5 to 7 matches

Schedule

08/07/22 - 30/07/22

Available spots through: Direct spots: 3, Play-off spots: 2

R. CHIKWELU
VIA MAJOR TOURNAMENT

Number of qualification matches

5 to 6 matches

Schedule

02/07/22 - 23/07/22

Available spots through: Direct spots: 4, Play-off spots: 2

K. BOWEN*

VIA MAJOR TOURNAMENT

Number of qualification matches

5 matches

Schedule

05/07/22 - 31/07/22

Available spots through: Direct spots: 0+1 (New Zealand), Play-off spot: 1

A. DAHLKEMPER
VIA MAJOR TOURNAMENT

Number of qualification matches

3 to 5 matches

Schedule

04/07/22 - 20/07/22

Available spots through: Direct spots: 4, Play-off spots: 2

A. MAJRI

VIA QUALIFYING COMPETITIONS

Number of qualification matches

8 to 12 matches

Schedule

16/09/21 - 11/10/22

Available spots through: Direct spots: 11, Play-off spot: 1

07

PLAYER IMPACT TRAVEL AND CONDITIONS

Travel represents another key element in the overall analysis of the load of players, as it has the potential to create issues around player health. Although COVID-19 temporarily decreased the volume of international travel, travel commitments are still a significant part of what it means to be a top player, but remains a concern when you look at the way in which some players are travelling. Fighting for travel conditions that meet the physiological health needs of players remains a frequent battle for many player unions and associations. The lack of proper and protected travel conditions further exacerbate the negative side effects of long and frequent trips. As with the previous chapter, we open the chapter with two players in focus, to show an example of how the differing travel loads between players who represent countries that compete outside of the Confederation they play their club football in.





UEFA MARÍA LEÓN ("MAPI")



Central Defender

Mapi León is one of the players who travelled the most due to international club competitions over the past three seasons as she played an important role in FC Barcelona's successful campaigns. She is also the one with the most appearances on record in the PWM database, indicating a high relative workload on the pitch, too.

Analysed match period: 31st August 2018 – 22nd June 2021

MATCH WORKLOAD

140
match appearances

87.8

minutes per appearance

12,293
minutes played in total

CRITICAL ZONE



50.8%
of all minutes played
in critical zone

- 
- María León has played as a central defender with FC Barcelona since 2017 and was one the key members of 2020/21 treble-winning side, capturing the Primera División Femenina, UEFA Women's Champions League and Copa de la Reina.
 - During the period she travelled internationally 31,000 kilometres per season, which equates to approximately 6 full days since 2018. As she played regularly in the final stages of the continental club competition, she is one of the 10 players who travelled the most for international club matches in the PWM sample.
 - Over the past three seasons María León has accumulated 140 appearances and over 12,000 playing minutes, the highest of all the players in the sample. She is also the only player to exceed the threshold of 5,000 minutes played in a single season (18/19).
 - In particular during the 2018/19 season, she played 57 matches, including four in the 2019 World Cup. The 2019/20 season counts a total of 34 matches, almost entirely played before the COVID-19 suspension (163 days), with the exception of two matches of the 2019/20 UEFA Women's Champions League played at the end of August 2020, before a 25-day off-season break and the start of the 2020/21 season (49 matches).
 - Over the past three seasons María León has played 6,242 minutes in the critical zone (51% of the total), the highest value in the sample. Her calendar shows little balance, as there are very congested periods (e.g. April 2019) alternating with periods of very few matches.

TIMELINE OF THE PERIOD UNDER ANALYSIS

María León endured a 163-day Covid suspension before the eventual start of the 2020/21 season.

% of total break days (off-season and COVID suspension) **25%**

31 Aug 2018

2018/19
297 days / 57 matches



Off-season break
68 days

31 Aug 2019

2019/20 before COVID
193 days / 32 matches



COVID suspension
163 days

Off-season break 25 days

19 Sep 2020

2020/21
276 days / 49 matches

22 Jun 2021



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

APPEARANCES BY MATCH TYPE

Over the past three seasons María León played a total of 12,293 minutes, the highest figure in the PWM sample.

Considerable variety of different competition types.



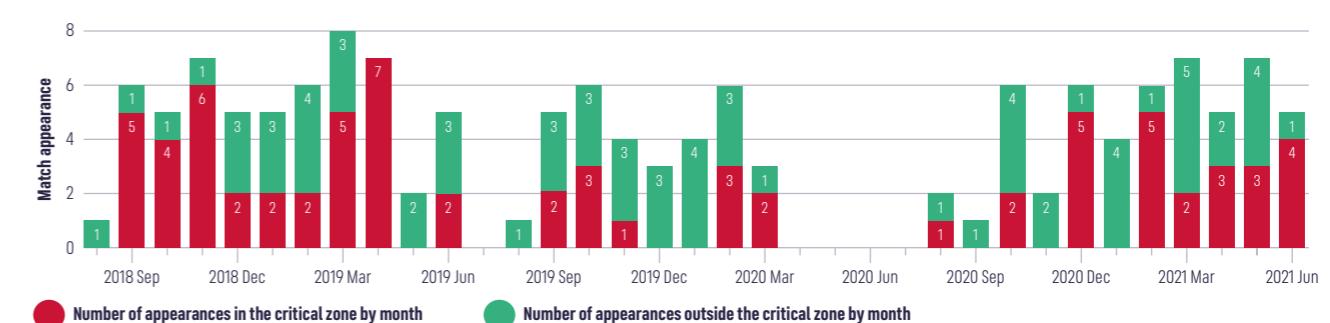
TRAVEL COMMITMENTS

National team travel increased significantly during the 19/20 season as Spain was invited to participate in the 2020 SheBelieves Cup for the first time.



CRITICAL ZONE APPEARANCES

María León's calendar has been quite unbalanced as there have been very congested periods (e.g. April 2019) that alternated with periods of very few appearances.





UEFA & AFC SAM KERR



Forward

By playing in three different Confederations and as a key member of Australia's national team, Sam Kerr is one of the players who travelled the most in recent years. International competitions (World Cup, Olympic Games) were the main source of the travel load.

Analysed match period: 4th November 2018 – 5th August 2021

MATCH WORKLOAD

108
match appearances

86.3
minutes per appearance

9,325
minutes played in total

CRITICAL ZONE

34.4%

of all minutes played
in critical zone



- Sam Kerr has played for three clubs from three different Confederations during the period. The analysis includes 13 matches played in the Australian W-League with Perth Glory FC in the 2018/19 season, 23 matches in the NWLS with Chicago Red Stars in 2019 and 43 appearances with Chelsea FC between 2019/20 and 2020/21, in both the FA Women's Super League and the UEFA Women's Champions League.
- After her transfer to Chelsea FC, Sam Kerr played in an international club competition for the first time in her career, taking part in 8 matches of the 2020/21 UEFA Women's Champions League, reaching the final against FC Barcelona.
- Over the past three seasons she has played 29 matches with the Australian national team, including the 2019 FIFA Women's World Cup and the Tokyo Olympic Games.
- National team matches represent the main reason for her relevant travel commitment. In the period under analysis she travelled more than 214,000 kilometres (the 3rd highest value in the sample), spending around 288 hours travelling and crossing 133 time zones.
- Despite facing one of the longest COVID-19 suspensions in play (171 days), over the last three seasons Sam Kerr has accumulated over 9,000 playing minutes across 108 appearances.

TIMELINE OF THE PERIOD UNDER ANALYSIS

Sam Kerr has changed clubs three times during the analysed period, playing in three different confederations (UEFA, AFC, CONCACAF).

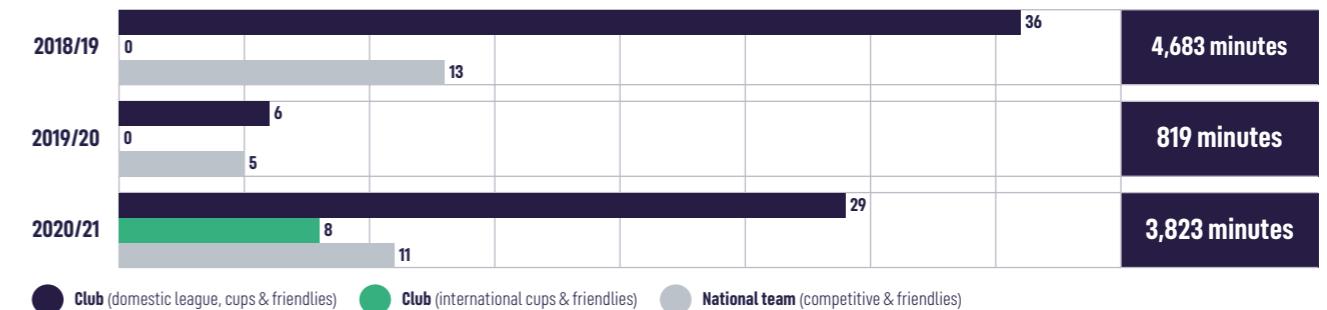
% of total break days (off-season and COVID suspension) **23%**



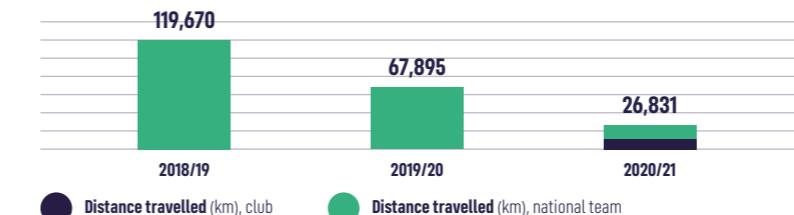
Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

APPEARANCES BY MATCH TYPE

Sam Kerr started to play also international competitions at club level during the 2020/21 season, thanks to her transfer to Chelsea FC.



TRAVEL COMMITMENTS



214,396 kilometres in total.
Travelling 5.3 times the length of the Equator.

Approx. 12 days spent travelling and
133 time zones crossed.

EXAMPLES OF LONG DISTANCES TRAVELED

Because of her national team matches, Sam Kerr has travelled internationally several times.



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

INTERNATIONAL TRAVEL LOAD AND TRAVEL CONDITIONS

Travel to other continents and crossing many time zones is a requirement and a feature for many players in elite professional football. In this section we analyse all international cross-border travel by the players in the sample over the past three seasons.

Besides cross-border travel, domestic travel can also put a significant burden on players, depending on the geographical dimensions of the country their competition is located in (e.g. the NWSL in the United States). For the purpose of this report, however, we are not considering domestic travel. It should be noted that cross-border travel between cities was assumed to be air travel in our calculations if they exceed 200 kilometres.

Excessive travel can have a negative impact on player performance and wellbeing. Long-distance travel regularly includes crossing multiple time zones and extreme climate change, particularly when travelling from the north hemisphere to the south and vice versa. FIFPRO recommends that minimal travel standards

during long flights, e.g. travelling in business class, should be established. Studies have shown that there is an increased risk of Venous Thromboembolism (VET) or Deep Vein Thrombosis (DVT) also known commonly as the "economy class syndrome" for high-performance athletes travelling long distance by air, in cramped conditions.

Across the entire PWM sample we can see a significant dip in average distance travelled in 2019/20, due to the cancellation of national team and other international matches. The 43% year-on-year reduction is partially attributable to the fact that the 2018/19 season includes the trips made in connection to the 2019 FIFA Women's World Cup in France. However, during the 2020/21 season there was a further small decrease (-3%), despite the Olympic Games taking place in Tokyo, Japan. This indicates that international travel in women's game still has not reached its pre-pandemic levels, regardless of major competitions such as the World Cup or the Olympics.

Total distance travelled by an average player in the PWM sample by season (km)



Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

The introduction of new competitions and the expansion of existing ones in the future means that international travel is expected to grow significantly, particularly with the 2023 FIFA Women's World Cup and inter-continental playoffs being hosted in the Southern Hemisphere and the majority of professional football being played in the Northern Hemisphere. As of the date of publication, FIFPRO research shows that only one competition in international women's football has regulated travel in a way that meets FIFPRO recommendations.

This competition is the 2019 FIFA Women's World Cup, France. However, ambiguity and a lack of oversight in its implementation still allowed some Federations to still not supply their women's national team players with the correct and proper travel conditions they needed both pre- and post-competition. FIFA funded flight upgrades for travel over five hours for the 2019 competition for up

to 35 people, which did not cover travel for all teams. As a comparison, the 2018 Men's World Cup provided business-class return flights for 50 people no matter the travel time. This type of disparity between what is offered to men's and women's national teams needs to be addressed, and the importance of travel conditions raised and discussed in other international competitions as well. Historic and embedded discrimination will prevail if this is not properly equalised, regulated, and mandated across the board.

The next section ranks and illustrates how much players are travelling inside a competition cycle that contains a World Cup. This clearly shows how important travel conditions are for an elite international footballer, as the volume of travel already being undertaken is significant – and likely to increase.

TOP 10 PLAYERS BY TRAVEL LOAD

In this section we identify the most extreme cases of high travel load from the PWM sample. The table shows the top 10 players by total travel distance over the past three seasons (2018-2021).

- The ranking is dominated by players playing in a club and a national team part of a different confederation. Indeed, 86% of the total travel load in the sample is due to national teams' duties.
- Over the past three seasons, seven players included in the sample have travelled more than 200,000 kilometres.
- The Chile and Lyon goalkeeper Christiane Endler tops the ranking (she played for PSG in the analysed period), with almost 250,000 kilometres, corresponding to 6.2 trips around the length of the Equator, and resulting in 14 days of total time spent in transit.
- The second position is occupied by the Scottish player Rachel Corsie, who played for three clubs in the period

under analysis (if we consider Kansas City Current as the successor of Utah Royals). She registered the highest travelled distance for a single route within the sample: more than 18,000 kilometres travelled from Canberra (Australia) to Lagos (Portugal) for the Algarve Cup.

- Moving down in the ranking we find Sam Kerr, for whom the majority of her travels refer to national team's matches, and two Canadian players, Allysha Chapman and Sophie Schmidt, who travelled more than 100,000 kilometres during the 2018/19 season, mainly because of the World Cup.
- Interestingly, Desiree Scott is the player who crossed the most time zones over the past three seasons.
- The top 10 is rounded off by players representing national team outside UEFA, but playing in Europe, with the exception of Debinha and Nichelle Prince, playing both at club and national team level in the CONCACAF area.

Top 10 by Travel distance (km)

Player name	Club(s)	Travel distance (km)				Time zones crossed			
		2018/19	2019/20	2020/21	Total	2018/19	2019/20	2020/21	Total
Christiane Endler	Paris Saint-Germain FC Féminine	119,536	86,033	43,814	249,383	74	42	22	138
Rachel Corsie	Canberra United FC, Utah Royals FC, Birmingham City FC Women and Kansas City Current	148,370	17,642	57,316	223,328	103	16	46	165
Sam Kerr	Perth Glory FC, Chicago Red Stars and Chelsea FC Women	119,670	67,895	26,831	214,396	72	40	21	133
Allysha Chapman	Houston Dash	131,437	20,693	52,755	204,885	106	18	39	163
Sophie Schmidt	Houston Dash	131,437	20,693	51,651	203,781	106	18	39	163
Debinha	North Carolina Courage	101,791	27,882	71,685	201,358	68	16	44	128
Desiree Scott	Utah Royals FC and Kansas City Current	127,576	21,038	51,913	200,526	112	20	42	174
Camila Sáez	Rayo Vallecano Femenino	97,840	74,819	20,575	193,234	60	36	12	108
Caitlin Foord	Sydney FC, Portland Thorns FC and Arsenal FC Women	108,125	65,567	16,334	190,026	72	37	13	122
Nichelle Prince	Houston Dash	109,684	20,693	54,848	185,224	88	18	39	145

Source: FIFPRO PWM platform, KPMG Football Benchmark analysis

PRECARIOUS CONDITIONS IN CLUB FOOTBALL

This section brings to light examples of the precarious working conditions that still exist in women's professional club football. Both examples are from leagues that can be considered as top club leagues, with a strong history of success and opportunity for players.

The relevance to the conversation regarding player workload is clear – we must ensure we have an understanding of not just how much players are playing, but the conditions in which they play and train. This gives a more holistic overview of the status of the industry and circumstances that impact player health and wellbeing.

BIRMINGHAM CITY WOMEN, FA WOMEN'S SUPER LEAGUE

In April 2021, Birmingham City players submitted a formal complaint relating to player working conditions at the club. The players said that the lack of proper sporting infrastructure in their workplace meant that players were unable to perform to the best of their ability. Concerns related to the access to a gym, inadequate changing room facilities and poor travel conditions to away fixtures.

The Birmingham City players also reported that financial compensation was below minimum wage (\$11 per hour), there was insufficient medical treatment, an inadequate squad size, and that players were expected to play injured. As a consequence, Birmingham pulled out of a fixture against Tottenham in January 2021. The club responded to the player complaints citing budget issues, compounded by the COVID-19 pandemic.

RAYO VALLECANO WOMEN, PRIMERA IBERDROLA

In December 2020, players from Rayo Vallecano Femenino were on the verge of striking due to adverse labour conditions and the ambiguity surrounding their workplace. Rayo Femenino are currently battling relegation in the Primera Iberdrola and have been engaged in a battle for equal, fair treatment within their workplace for 12 months. Playing environments are key to the overall workplace conditions of players, yet Rayo Femenino players state that within their workplace facilities, both material and personnel, compared with their equivalents on the men's side are vastly different.

Players at Rayo Femenino reported that they lacked standardised medical care, a doctor, a physiotherapist, and they were not registered for social security or within the Spanish health system. This breached the collective agreement signed in February 2020 – which states all

Former Birmingham City Manager Carla Ward stated: *"My time as manager at Birmingham City was really challenging. The girls didn't have the environment or the facilities to compete in the FA WSL. The players had no access to a gym, changing rooms or food after training. There were players who were not remunerated for their work and struggled for access to a physiotherapist and proper medical care, which meant delays for injured players returning to training and delays to operations. All of this was really difficult to manage as it means that players cannot perform to their full potential, or do their jobs, which impacted players emotionally, mentally and physically. For me there's two potential solutions, firstly an independent audit of the clubs to see whether they are meeting the FA's license requirements and second, further investment into the game, whether that's directly from club or the FA."*

clubs must have a plan for labour risk prevention. The Spanish players' union (Asociación de Futbolistas Españoles, or AFE) stated that the situation at Rayo Femenino was unsustainable and reported Rayo Vallecano to the country's Department for Work and Social Security, specifically for not having a team doctor against Athletic Club.

Non-financial benefits are a significant feature in the professional women's game. Rayo Femenino players cited that their rent was not paid on time by the club and as a result 16 players were thrown out of their accommodation. As stated in our 2020 'Raising Our Game' report, housing, health insurance and food are among the primary non-financial benefits provided for women's players and are crucial to their overall conditions, health, wellbeing and security.

Both examples show that even in two of the most established leagues in women's football, there continues to be precarious conditions that negatively impact the players and impact their ability to perform at their best.

The growth of women's football must be balanced with protection of the basic rights of players, and these rights must be recognized and properly enforced. In the case of both Birmingham and Rayo Vallecano, the agreements that were in place – such as the collective agreement in Spain – were not upheld.



"Give us exactly what we need to perform at the absolute best that we can because that's the product, that's what people come to watch, that's what people buy tickets to come and see. All we ask is that conditions are equal."

Steph Catley

Arsenal FC, Australian national team
(from FIFPRO Podcast)



CHANGING THE GAME
Episode 9



08 CONCLUSION

The data, analysis and evidence presented in this workload report has provided us with an opportunity to produce meaningful concluding remarks, as well as strong recommendations for the future. It is clear that when it comes to player workload in elite women's football, nothing occurs in isolation. Meaning, it becomes crucial to look at the whole picture to gain an understanding for the types of shifts that must occur, if women's football is to meet the potential and needs of the players and the industry.

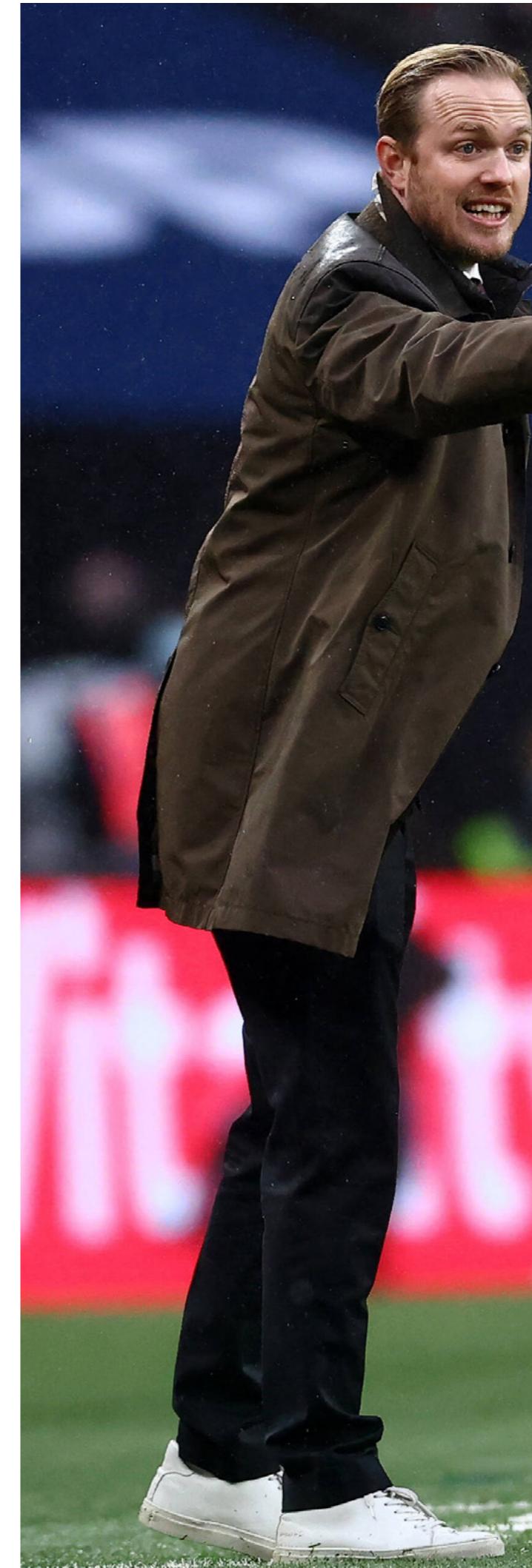
Dialogue, consultation, and clear communication between the stakeholders must be further established and embedded. The FIFPRO Raising Our Game Report presented the need for the professional industry to develop a common vision that provides a definitive pathway for the sustainable evolution of the game. This rings true, now more than ever. As more competitions enter our game, cooperation between the organising bodies, collective representation of the players and other stakeholders must come together to ensure greater cohesion – especially with regards to the scheduling of matches. That way, new and meaningful playing opportunities can enter the game whilst still protecting and promoting the health and physiological need and limitations of the players.

Without this vision and dialogue, the scheduling issues and over-reliance on "friendly" matches and competitions will not be addressed in a sustainable way. The prevalence of underload is at risk of continuing, juxtaposed with the periodic congestion and overload we see in some parts of the professional industry. This will continue to put strain on players, affecting their ability to perform and thus help bring the competitions themselves to their potential. In-season and off-season breaks must be optimised in a way that allows for

players to have the important regenerative rest they need, allows for a proper pre-season in their club environments and is specific to the needs of women's football players but does not leave some players without competitive matches for long periods of time. A balanced and cohesive calendar, with proactively built-in player protections, will address scheduling issues that have allowed underload and overload to prevail.

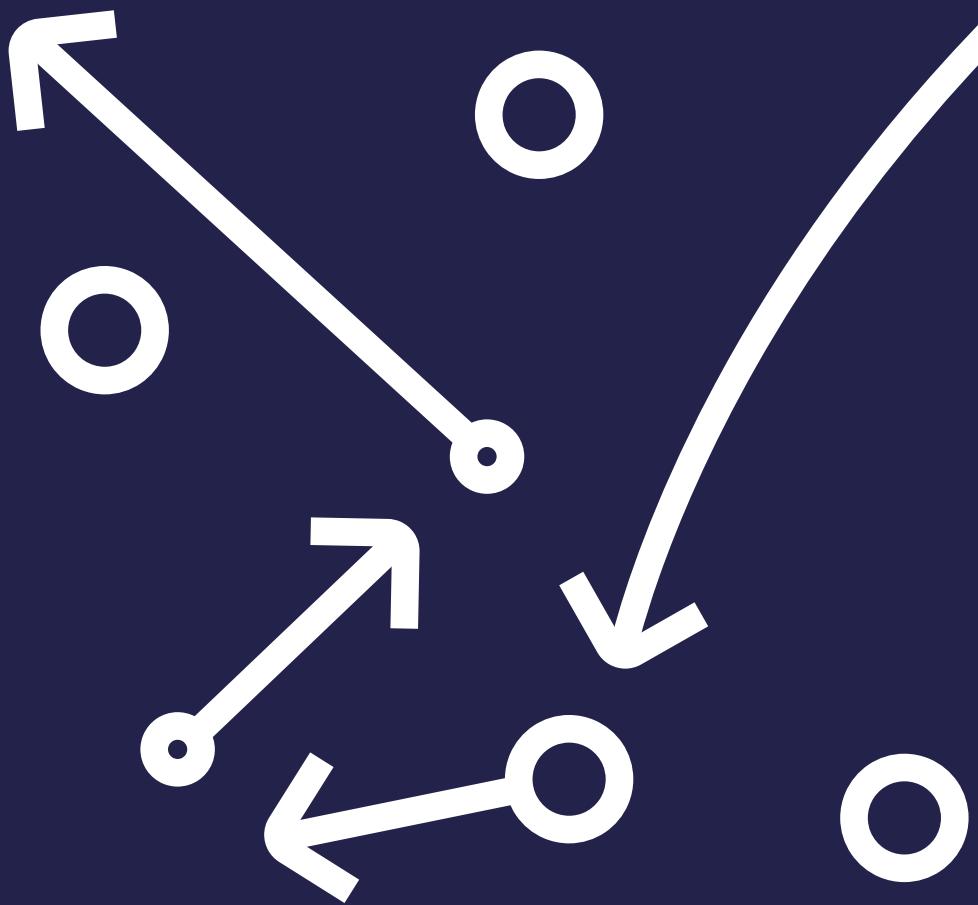
Lastly, we must always look at the broader conditions surrounding the players. An area of particular concern we see in this report are playing and travel environments. Even in some of the more established and "professional" competitions, we do not see the type of conditions that players are not only entitled to, but fundamentally need in order to do their jobs. Introducing and enforcing medical standards is essential across the industry, and standardised in a way that doesn't allow for precarity and ambiguity. Similarly, with professional women's football being concentrated in just a few major markets, we must ensure that travel conditions for players are set at the level needed for their physiological wellbeing. Business class travel must become industry practice, especially for women's national team players that are traversing long distances and crossing multiple time zones.

As stated, nothing presented in this report exists in isolation, and all components are critical to the potential and sustainability of a player's development and career as a professional athlete. It therefore requires the utmost attention and care, and this must be grounded in factual evidence that is gender-specific, before any future developments to competitions can be discussed and implemented.



"It's important to put player welfare first. As a player you want to play and be available but when you look at the schedule across the season, players will need time off. Not just physically, but to be motivated and refreshed from a mental perspective. There needs to be a co-operation with National Teams so players can have a break and are in the best possible condition."

Jonas Eidevall
Arsenal FC coach



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