



Contribution of

Colour Blind Awareness CIC

to

the Office of the High Commissioner for Human Rights'

**Study on sports and article 30 of the Convention on Rights of Persons with
Disabilities**

Submitted by

Kathryn Albany-Ward

Founder/CEO

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**Colour Blind Awareness, Bay Tree House, 17 Menmarsh Road, Aylesbury, HP18 9JT Tel: ++44
(0)1844 396336**

www.colourblindawareness.org

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7336120 – Registered Office: 3A Minton Place, Victoria Road, Bicester, Oxfordshire OX26 6QB**

Colour Blind Awareness

Colour Blind Awareness (CBA) is a UK based non-profitmaking NGO established in 2009 to raise awareness of the problems faced by people with colour vision deficiency (CVD, colour blindness – also known as ‘daltonism’) and to provide advice for individuals and organisations.

CVD is a condition which can have many adverse effects in everyday life including upon educational achievement and upon full participation in sport as spectator, athlete or employee.

For further information on colour blindness see www.colourblindawareness.org including details of the work of Colour Blind Awareness in sport, such as creating the first Guidance document for football on behalf of UEFA/the English FA (see image below), its status as Official Observer to the Council of Europe Standing Committee TR-7, its role as a Football and Social Responsibility Partner of UEFA and its involvement in a pan-European project funded by the EU’s Erasmus+ programme, which is investigating prevalence of colour blind players in football. A summary of CBAs work in sport in 2020 can be found here <http://www.colourblindawareness.org/wp-content/uploads/2020/07/Colour-Blind-Awareness-in-Sport-2020.pdf>.



Figure 1: Front cover of the FA/UEFA Guidance documents on colour blindness in football



1.0 Introduction

Colour blindness is one of the world's most common inherited conditions.

It affects

- approximately 300 million colour blind people worldwide and varies in prevalence between different types of population
- 1 in 12 (8%) males but only 1 in 200 (0.5%) females, meaning that, particularly in countries of North European descent, men are 16 times more likely to be colour blind than women. In Asia, on average males are 10 times more likely to be colour blind than females
- There are different types and severities of CVD meaning not everyone with the condition perceives colours in the same way

2.0 What is colour blindness?

2.1 Humans see colour through three types of specialised cells (cones) in the retina at the back of the eye. These cones absorb red, blue and green light respectively and work together to allow the full visible spectrum to be perceived. With inherited CVD one cone type doesn't function normally or (in 25% of cases) doesn't function at all.

- CVD is carried on the X chromosome, hence the much greater prevalence in males than in females
- CVD does not improve or deteriorate through normal life and has no cure
- defects of red or green cones are commonly known as 'red/green colour blindness' but are actually different conditions and severities
- CVD affects many more colour combinations than just reds and greens
- CVD can be acquired from other conditions e.g. diabetes/multiple sclerosis/other visual impairments e.g. glaucoma and retinitis pigmentosa

3.0 Failure by society at large to cater for colour blind individuals

3.1 People with colour blindness are being failed by society at large due to a lack of understanding of the condition and its impacts. For example, in some countries people with colour blindness are not permitted to drive a car. Even within the UK those with colour blindness are discriminated against due to erroneous drafting in equalities legislation. This fact has been recognised by the Women and Equalities Committee of the UK Government and has not yet been resolved. The very fact that this issue is not being addressed by Government Ministers in the UK underlines the widespread lack of understanding and empathy for people with colour blindness.

For more information see Colour Blind Awareness's written evidence to the Women and Equalities which was published by the Committee on the website for the UK Parliament here

<http://data.parliament.uk/WrittenEvidence/CommitteeEvidence.svc/EvidenceDocument/Women%20and%20Equalities/Enforcing%20the%20Equality%20Act%20the%20law%20and%20the%20role%20of%20the%20Equality%20and%20Human%20Rights%20Commission/written/90946.html>.



4.0 Contribution of Colour Blind Awareness to the request of the Office of the High Commissioner for Human Rights for consideration when preparing a study on sports following article 30 of the Convention on Rights of Persons with Disabilities

4.1 In response to the request of the OHCHR, Colour Blind Awareness is keen to make the following contribution. This contribution also reflects a gender perspective, but from a different angle to structural discrimination against women and girls with disabilities.

4.2 The organisation would like to stress it agrees that equal inclusion in sport for women and girls with disabilities, including those with colour vision deficiencies, is extremely important, whilst also highlighting that colour vision deficiency is a disability disproportionately affecting males.

4.3 The contribution made below addresses the questions upon which the OHCHR has requested specific responses. The contribution follows the format sought by the OHCHR but it should be noted that not all questions are relevant to the activities of Colour Blind Awareness and therefore some questions have not been addressed in detail. The OHCHR questions are written in italics.

Section 1 Recreation and leisure

1(a). *Does your country have laws, policies, plans, strategies or guidelines¹ and departments at any level of government relating to the inclusion of persons with disabilities in mainstream (not disability-specific) recreational and leisure physical activity, including but not limited to:*

- **Private settings:** *Private gymnasiums, sports clubs, sports associations and foundations, summer camps, marathons, swimming pools, among others;*
- **Public and private tourism platforms:** *tourism facilities (e.g. beach, mountain, forest, among others), including services for persons with disabilities;*
- **Public settings in urban areas:** *Urban sports trails, cycling trails, public physical training, yoga, recreational sports, playgrounds for children, recreational facilities for older persons, among others.*
- **Nature trails:** *hiking trails, nature centers, toilets, viewing platforms, count with accessibility and services.*

Response of Colour Blind Awareness

The vast majority of people with colour vision deficiencies, unless they also have other disabilities which may be a barrier to participation, do not experience overt barriers to participation in mainstream sport. However, due to widespread ignorance of this condition, (which is a hidden disability) they are usually discriminated against. Such discrimination is usually inadvertent, due to ignorance rather than intentional discrimination, but nevertheless barriers to entry and to progression within a sport do exist.

For example, there are few policies and no specific legislation CBA is aware of to either include or exclude people with CVD from participating in any sports (see Referees below at 3(e), final

¹ These regulations and guidelines should refer to ensuring accessibility of venues/facilities, accessibility of information and communications, reasonable accommodation, support service provision, affordability, procurement, data collection and disaggregation, among others.

bullet point response) but due to ignorance of how to support people with CVD, their needs are usually overlooked, therefore placing people with CVD at a disadvantage. Examples of this inadvertent discrimination can be given for each of the bullet points raised:-

Private settings – information and equipment is frequently provided in colour only which cannot be properly discriminated by people with CVD. This can put people off certain sports at a young age, see sports hall line marking images below.



Figure 2a normal colour vision



Figure 2b colour blind simulation

Public and private tourism platforms - these may not account for people with CVD. Consider, for example, different coloured flags used on beaches to indicate safe swimming areas, surfers' sections etc. Colours can be indistinguishable for those with CVD making them potentially feel unsafe and unwilling to participate.

Public settings in urban areas: facilities such as cycling trails can be particularly problematic for those with CVD. Often cycle and other routes are usually colour-coded and impossible to make sense of. Such ignorance on the part of providers is a deterrent to participation for those with CVD.

Nature trails: as above, any information such as maps which uses colour-coded routes can be problematic for those with CVD and therefore discourage participation.

To avoid inadvertent discrimination of huge numbers of people (there are 3 million colour blind people in the UK alone), suitable guidance and policies are needed, developed at Government level or higher, to ensure accessibility of information and equipment.

1(b). *What are the challenges to implementing the above? Are you aware of good practice related to the above?*

Response of Colour Blind Awareness

With regard to colour vision deficiencies specifically, the overwhelming barrier is lack of awareness of the condition in society as a whole. A cultural change is needed to enable this issue to be successfully addressed. Until those with ability to effect change working within International organisations such as the United Nations, the Council of Europe, the EU etc are able to influence Governments to take action, people with colour blindness will continue to be ignored.



In an attempt to try to accelerate awareness in society, CBA established Colour Blind Awareness Day in 2016 with the aspiration that it will eventually become internationally recognised and give those with colour vision deficiencies a voice at every level in sport.

Since 2017 Colour Blind Awareness Day has been recognised by the English Football Association and resources have been created to build upon awareness year on year (– see <https://twitter.com/FA/status/1169969499354718211>). CBA was delighted to discover that the EU Council recognised Colour Blind Awareness Day in 2019, see <https://twitter.com/EUCouncil/status/1169875379198279680> . The successful bid for funding to the EU Erasmus+ programme for a Collaborative Partnership, Tackling Colour Blindness In Sport, will allow CBA to develop further develop awareness of Colour Blind Awareness Day via the International project Partners including the Portuguese, Icelandic and Romanian Football Associations and the European Football Development Network (see page 2 <http://www.colourblindawareness.org/wp-content/uploads/2020/07/Colour-Blind-Awareness-in-Sport-2020.pdf>). This project will also research prevalence of colour blindness in football players at all levels of the game, identifying barriers to progression and to develop solutions.

However, this is only a small step towards the huge task of educating of society as a whole of the implications of this hidden disability in education and sport. Outside the work of Colour Blind Awareness there is very little recognition of colour blindness worldwide.

An example of a good practice solution to address the line markings example under Private settings above can be seen in the response to 3(c) below. It is worth noting that good practice actions which can enable full participation for those with colour blindness are often common sense, simple and inexpensive and usually benefit everybody as they make information and equipment more accessible to all.

Section 2 Education

2(a). Does your country have laws, policies, plans, strategies or guidelines on physical education in public and private schools, including in special education, informal education and extra-curricular activities, relating to the inclusion of persons with disabilities, particularly children and young people, to avoid their exclusion or exemption from physical education and facilitating contact with disability-specific sports? What are the objectives of these instruments?

Response of Colour Blind Awareness

The UK has the Equality Act 2010 which is intended to protect the rights of people with disabilities in all areas of life including education and sport. With regard to people with colour vision deficiencies, this legislation is flawed. The UK Government’s Equalities Office, (GEO, a UK Government Department) is aware of this at Ministerial level yet is unwilling to amend the necessary secondary legislation. The representations of Colour Blind Awareness to the UK Parliament’s Women and Equalities Committee have been recognised and published by the Committee (see link in the Executive Summary above) yet no further action has been taken by the GEO. In effect the GEO is therefore condoning discrimination against people with colour blindness and discouraging them from seeking legal recourse to protect their human rights.



In terms of guidance, teacher training or other information there is no official information available from either the UK Government's Department for Education or the Department for Culture, Media and Sport (DCMS) to ensure the inclusion of people with colour vision deficiencies, despite the condition affecting 450,000 children (under 18 years of age). The Department of Education has shown limited interest in engaging with Colour Blind Awareness whilst the DCMS has shown no interest in engaging with CBA whatsoever. Until Government Departments are willing to actively engage and create policies to address discrimination, colour blind people will continue to be discriminated against across sport and education.

CBA is not aware of any policies to specifically support colour blind people in any other countries.

2(b)(i). Are teachers and professors of physical education trained to include students with disabilities in either mainstream or disability-specific physical education?

Response of Colour Blind Awareness

In relation to persons with colour vision deficiencies specifically, no. Teachers are not generally trained in how to support learners with CVD. However, CBA is working with Premier League Communities and the English FA PE unit on a project to train and to provide resources for 8,000 coaches working in primary schools. This work is being funded via a grant from the UEFA Foundation for Children and would not have been possible otherwise. Teacher training colleges and universities and coach education providers do not train students in how to support those with colour vision deficiencies. Even within football, CBA is not aware of any existing training courses for coaches which refer to the needs of those with CVD. It is worth noting that coaches and teachers can also be colour blind and excluded from training resources and information which rely on colour only to convey information.

2(b)(ii). Do persons with disabilities who want to be teachers and professors of physical education have access to equal certification to exercise the profession?

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness, see reference to inaccessible course resources and information referred to in 2(b)(i) response above.

2(c). What are the challenges to implementing the above? Are you aware of any good practices related to the above?

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness.

Section 3 Sports

3(a). Does your country have national, regional and local sports departments addressing and promoting competitive sports that cover both mainstream and disability-specific sports, either integrated or separated?



Response of Colour Blind Awareness

Colour Blind Awareness operates at a pan-European level in partnership with international governing bodies (e.g. FIFA, UEFA, the Council of Europe), National sports associations (e.g. The Portuguese Football Federation, The Icelandic Football association, the Lawn Tennis Association) and is aware that different situations apply in different countries. It is not within the remit of CBA to hold details of specific situations in different countries/amongst different Governing Bodies but it is essential to note that people with colour blindness, due to their significant prevalence in society as a whole (up to 5% of society), will be represented in significant numbers in both mainstream sport and disability-specific sport worldwide.

As CBA has been working with European Amputee Football, an organisation which once made aware of the implications of colour blindness on their sport, realised the importance of removing discrimination and barriers to progression. CBA is reliant upon organisations such as European Amputee Football using their influence at national and international level to introduce change both within their own sports and to other sporting organisations they work closely with.

In terms of elite sport, there will be colour blind players and athletes represented in great numbers in most sports. Statistically there will be at least one colour blind player in every male football squad, for example. Unfortunately these players are very unlikely to reveal a diagnosis of colour blindness for fear of inadvertent or even blatant discrimination by their clubs (e.g. fear of being benched or dropped from the team if they struggle to tell team kits apart). As players are unwilling to reveal their colour blindness, managers and coaches are unaware of the extent of the problem.

In cricket some National team colour blind players have been forced to advise management of their condition when new ball types have been introduced to the game without sufficient research. Having been forced to reveal their diagnosis they have experienced discrimination resulting in negative impacts upon the international careers of some players.

This is a shocking situation which should not be tolerated, yet how can offending Governing bodies who are knowingly perpetuating such discrimination be brought to account? For more information read <https://www.thetimes.co.uk/article/colour-blind-ballance-could-miss-pink-ball-matches-3sk6kgh5h>.

Women can also be colour blind, as discussed in the BBC article on colour blindness in football – see <https://www.bbc.co.uk/news/world-44535687>. This followed from widespread discrimination against colour blind football fans by FIFA during the 2018 World Cup. A retired female professional footballer with colour blindness is featured in this article and provides details of some of the problems her colour blindness caused in her playing career. Women's sports on the whole are unaware of the issues caused by colour blindness on both players and spectators, despite the resulting negative impacts on player performance and engagement of men in women's sports, as fans/spectators. Such potential impacts can clearly be demonstrated by the kit colours worn by the women's hockey teams in the 2018 Olympics field hockey final in the images on the following page. To colour blind people both kit colours appeared the same, turning many potential supporters away from the game.



Figure 3a normal colour vision



Figure 3b colour blind simulation

Unfortunately, despite such evidence, the needs of those with colour blindness are not taken into account in any policy for either mainstream or disability-specific sports, aside from the FA/UEFA guidance for football. CBA and the English FA produced a mini-documentary aimed at football coaches (see *The Colourful Game* <https://www.youtube.com/watch?v=RRs9gBSyDaM>) which is an example of good practice designed to influence change in national, regional and local sports departments and to promote better inclusion for players with CVD. However, although the Guidance was published in 2017 in 8 languages it has had very limited reach to date.

3(b). Do disability-specific competitions have a similar structure to mainstream competitions, either integrated or separated, to organize local, regional, national, continental and international competition?

Not applicable to the activities of Colour Blind Awareness, organisation of competition structures is not within the remit of the organisation.

3(c). What are the challenges that persons with disabilities face to access training centers prepared for high-performance sports at local, regional and national levels?

Response of Colour Blind Awareness

As stated in the response at 1(a), people with colour blindness are well-integrated within both mainstream and disability-specific sports due to the prevalence of the condition across society. Therefore, it is essential that all training centres, whether for high-performance athletes or for young children just starting out in sport, are made fully accessible. To achieve this

- coaches should be trained in how to support colour blind athletes, for example by using training equipment which does not discriminate against people with colour blindness. A good practice example is the Icelandic Football Association. Following the outlawing of inaccessible equipment from National team training sessions by their former (colour blind) National team coach, Lars Lagerbäck <https://www.youtube.com/watch?v=OMBnaoEShEE>, the Icelandic Football Association has taken positive steps to ensure equipment, training techniques and problematic kit colour combinations are avoided. Examples of potentially

problematic equipment (which are also relevant to many sports) can be seen within the UEFA/FA Guidance. Two examples, with personal impact accounts from a retired, former International colour blind player and an 8 year old boy.



Figure 4 above demonstrates how coloured training bibs can cause problems for colour blind footballers



Figure 5 above demonstrates how some training equipment can be impossible for colour blind players to see.

- leagues and those responsible for organising competitions (from worldwide organisations such as the IOC and FIFA, down to those organising events for small children) must review competition rules to ensure kit combinations and equipment used does not discriminate against those with colour blindness. For example, Olympic canoeing relies upon a course which comprises red and green gates, the colours determining the direction of travel through each gate, either up or downstream. Colour blind people are usually unable to distinguish between red and green
- venues, whether large stadia or small, local venues such as tennis courts should ensure no information is illegible to people with colour blindness. This includes 'information' such as line markings in multi-sports halls (see good practice document here http://www.colourblindawareness.org/wp-content/uploads/2019/11/Grassports_colour-blind-manual_FA_WEB.pdf). Note, for example, that the colour of a running track used for Olympic or World championship athletics can be the difference between whether a colour blind spectator can follow the event or not. Red surfaces create difficulties on seeing athletes, especially those with darker skin tones against the colour of the track.

A blue surface, however, enables all athletes to be easily seen. See an example of good practice for Olympic hockey field line markings (London 2012) below,



Figure 6a normal colour vision

Figure 6b colour blind simulation

and wayfinding information (e.g. stadium plans for spectators), training instructions, accreditation, health and safety notices e.g. COVID-19 social distancing signage and fire evacuation notices etc. does not rely on colour only to convey information.

3(d). *Are there laws, policies and mechanisms in place to ensure fair distribution of public grants, awards and other financial support to ensure that sportspersons with disabilities have equal opportunities to succeed in competitive sports?*

Response of Colour Blind Awareness

In terms colour blindness, CBA is not aware of any organisation which specifically considers the needs of those affected when distributing grants etc. CBA is unable to comment regarding other disabilities.

3(e). *Please provide information on the organizational structures of disability-specific sports, including examples and good practices. Kindly consider the following aspects when replying:*

- *Are they separate structures, or are they integrated into mainstream federations and clubs?*

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness. Due to the inherited characteristics of the condition, colour blind people exist in significant numbers in both mainstream and disability specific sports

- *Are they decentralized covering the whole territory or they only operate in capital city/area?*

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness



- *Are they sports-discipline specific, or they integrate multiple disciplines?*

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness

- *Do they receive equal funding opportunities compared to mainstream sports?*

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness

- *Are joint activities between sportspersons in disability-specific sports and mainstream sports encouraged or carried out to facilitate exchange among sportspersons within similar disciplines?*

Response of Colour Blind Awareness

Not applicable to the activities of Colour Blind Awareness

- *Are persons with disabilities considered in sports beyond their role as sportspersons, including as referees, coaches, spectators, administrators, workers, volunteers in the sports industry, board members, among others?*

Response of Colour Blind Awareness

People with colour blindness working across most sports are generally ignored whether they be spectators, journalists/commentators, referees, stewards, operations personnel or emergency services (for stadium events).

The issues faced by spectators are well known (see BBC article at 3(a) above) yet despite 140 million colour blind viewers potentially attempting to watch inaccessible Euro 2016 matches, the problems colour blind fans faced in trying to follow TV coverage of the 2018 football World Cup and the 2019 Rugby World Cup, their needs are almost totally dismissed by governing bodies, usually for commercial reasons. Sponsors and broadcasters have too much power and are obstacles to change in many instances.

In addition to the problems faced by colour blind spectators/journalists/pundits and commentators attempting to follow colour blind kit clash games either in stadia or on television, there are implications at stadium events for spectators, employees including office staff, management, players, temporary staff e.g. stewards/caterers and visitors with CVD. These include problems such as inaccessible signage and wayfinding information, accreditation and safety information. CBA is making some progress, via its consultancy role for UEFA and through its status of Official Observer to the Council of Europe TR-7 Standing Committee, in educating and effecting change amongst operators of UEFA host venues but there is a lot of work still to be done outside UEFA's sphere of influence.

Colour blind match officials/referees are at the mercy of the rules governing their particular sport. For example, UEFA does not permit colour blind referees in any of their competitions yet World Rugby does allow colour blind people to referee rugby World Cup matches. See



personal impact stories from colour blind football referees in both the BBC article and the FA/UEFA Guidance document (at page 25).

Colour blindness can impact anyone involved in any sport in any role, including at Board level. CBA is aware of two world governing sports bodies which have a person with colour blindness as their Chairman/President yet they have not yet taken any action to support their colour blinds stakeholders. This may be because these individuals have a milder form of colour blindness or, more likely, because they are not aware of the simple steps that can be taken to support their stakeholders.

ENDS