



Rural women and the forest issues preservation - Case study, Morocco

Said LAARIBYA ^{*1}, Assmaa ALAOUI ²

¹ Ibn Zohr University, Campus Ait Melloul, Labo GEDEZA (ER-GRND-MASA) Agadir, Morocco

² Technical Specialized Institute for Water and Forests, Morocco

Abstract

The thorough analysis of a places of states, integrating the "gender" dimension is very useful because it has been found to date, little knowledge gathered on the various ways in which women and men use to manage natural resources. There is a cause and effect between a local populations and the forest of Maamora in Morocco. The following article deals with the problem of interaction between rural women and natural resources through the testing and use of tools for gender mainstreaming in six soils representative a rural forest "Sehoul and Sidi Abderrazak" located in Maamora forest (Salé city and Khemisset city in Morocco). Rural women are forced to over-exploit existing forest resources to meet their basic needs and improve their living conditions. The majority of households in the commune practice extensive farming heavily dependent on the forest, and consume a large amount of fuel wood collection which is for women and young school children (boys and girls). The analysis of the seasonal calendar shows that there is an overload of women's activities that are related to the production and reproduction throughout the year. In fact, the wife and daughter perform several chores that require a lot of time and energy and are unfortunately neither paid nor valued in the local development process. This situation forces rural women to satisfy their needs at the expense of forest resources.

Key words: Maamora forest, rural women, forest resources, gender issues, ranching

1. Introduction

Rural women that has been forgotten development programs for a long time is the most vulnerable and poorest of the rural population. What is even more unusual, it could play a role in the fight against poverty and it has proven to be an excellent manager. Thus, the rural women, through its know-how and the activities it undertakes at the farm and household is a key determinant and local development.

The role of women reflects the allocation of tasks by sex within and outside the household and that based on the perception of social roles of men and women in society. However, this role it is vested does not guarantee equality of opportunity and equity in access to resources, services, property, income and control of power. Indeed, rural women are the population group most affected in terms of literacy, schooling, health, poverty, employment and income.

This is due to the rule of men in the exercise of authority and law, when the woman has most often use rights that are not generating income, and therefore limit independence and access to wealth. In this context, as part of our work when we dismantle the role of women in local development and conservation of natural resources. The common purpose of this study was chosen for several reasons: the existence of an interaction between rural women and natural resources, the multiplicity of information about the area and accessibility.

2. Materials and methods

The study involved the rural community of Sehoul and Sidi Abderrazak located in Maamora forest-adjacent to the city of Rabat, capital of Morocco, as a whole belonging to the central plateau to the northwest of Morocco (Figure 1).

It has been used for this study a few tools of gender, including the division of labor by gender to determine the nature and value attributed to the work of women and men, the type of work and analysis of the work to specify the amount of time spent on different types of work (especially by women), regularity of work, season and location, and the

* Corresponding author / Haberleşmeden sorumlu yazar: Tel.: +2120661257655; Fax.: +2120661257655; E-mail: laaribyasaid@gmail.com

level of participation. We also used a few tools of the participatory approach, namely the individual and group interviews in six semi-structured soils representatives of all fractions of the study area. Issues relating to both women and men for the various activities of the season. For this we have spent full days in the land, for each season of the year, winter, spring, summer and fall. The method used for data analysis (Stenger, 2006) is content analysis which aims to seek, in oral or written messages, objective and quantifiable elements to characterize the role of women. And clarifies the processes and situations in a simple way (Tyrvaäinen et. al., 2007). The table 1 shows the distribution in the rural town of Maamora which were the subject of our study.

This is a sampling rate of 29% of users douars rates far exceeding those used and recommended by FAO or 5-7% (Public participation in forest development, FAO, Rome, 1982). 140 households were surveyed is made according to the stratified sampling with optimum allocation.

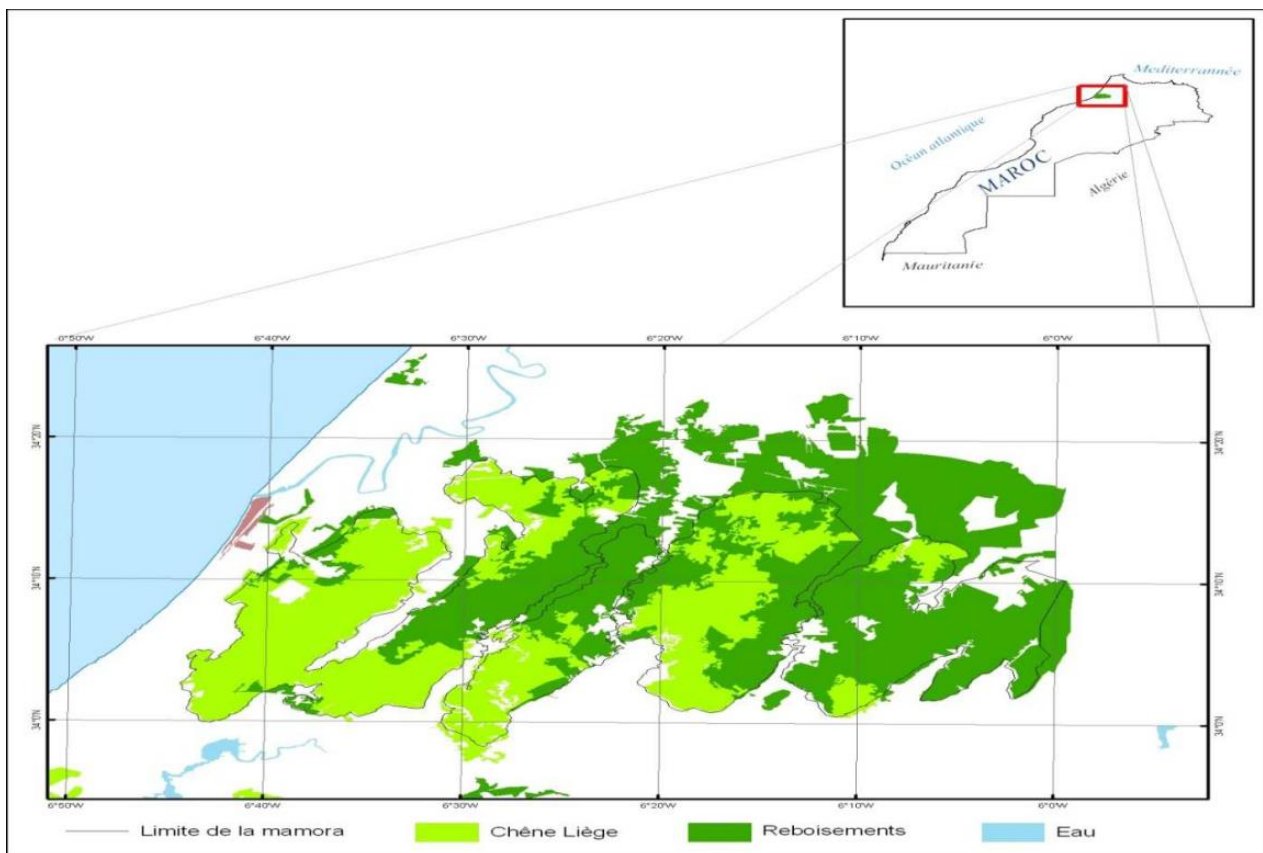
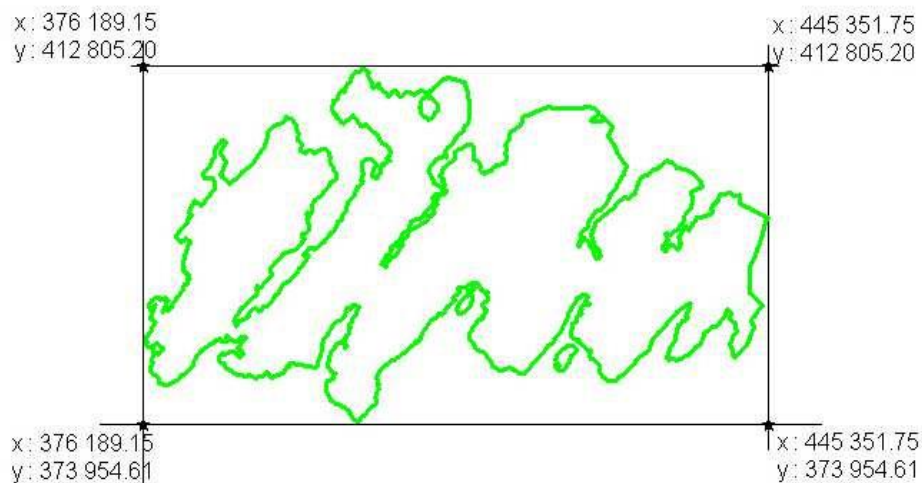


Figure 1. Location map and occupation of the rural town of Mamora (Morocco)

Table 1. Distribution of land subject of the study

Rural commune (Maamora)	Territories	Target areas (douars)	Number of target town
Sehoul	Jiahna	Hmoumiyine	02
	Jwaneb	Ouled Bni Abdellah	02
	Ouled Aziz	Ouled Aaziz Ouled Maala Ouled Dawed	03
	Jbabra	ElMharza	01
Total Sehoul			08
Sidi Abderrazak	Khazna Issa	Ait Issa Ait Boubker Osaïd Ait Abdenbi Ait ben Haddou Ait Abdenbi Ait Lhaj Omoussa Ait Ali ben Khezan Laababriyine	04
	Khazna Ait Kassou	El ghazwana Ait Kassou Ait Ali ben Khezan Ait ben Issa Ait Ali ben Khezan Ait Aamer Ouiissa	03
Total Sidi Abderrazak			07
Total			15

3. Results

Prior to characterize the role of women in local development, it has been presented the area to which they belong.

3.1. Population

This population is composed of 49% women and 51% men. The average household size is approximately seven people per household. The population of working age (15-60 years) which has 50% female population holds 27% and 23% male occupiers.

To better illustrate the distribution by sex, we have introduced the concept of age in the total distribution of the population. We consider four age groups, <7 years, 7 years, 15 years, 15 years, 60 years, and > 60 years. For the first class are the small, the second is composed of a range where there are students and some labor, the third class is the labor of choice and the fourth, that of older (Table 2).

Table 2. Distribution of land subject of the study

Age Sexe	< 7 years	7 à 15 years	15 à 60 years	> 60 years	Total
Male	10,6 %	14 %	23 %	3,4 %	51%
Female	8,2 %	11,8	27 %	2 %	49%
Total	18,8 %	25,8 %	50 %	5,4 %	100 %

Sources: 2010-2011 Survey

The population of this county has an illiteracy rate very high average of 63%. By sex, the situation remains serious, if not dramatic for women with a rate of 79%. So, this is a constraint that must be exceeded by the combined efforts as part of a development policy which aims at developing human resources through education.

3.2. Occupancy of land and modes of operations

4. The area of the rural community of Sehoul and Sidi Abderrazak is 63 856 hectare, its use is integrated into an agro-forestry-pastoral based on three components: cropland, pasture and forest (Table 3).

Table 3. Distribution of land in the rural study

Commune	Sidi Abderrazak		Sehoul	
	S (ha)	%	S (ha)	%
Agricultural area	8900	37,39	22000	54,24
Forest	15556	62,61	13075,74	32,25
Pasture + uncultivated	0	0,00	5 480,92	13,51
Total	24 456	100	39 400	100

Source: Rural community, 2011

Culture the most practiced at the joint is cereals 60% of the agricultural area. The remaining 30% is used for plantations, vegetables, forages and legumes or left fallow (Laaribya, 2006). The two Commune have a pastoral tradition. Thus, the majority of operators practice extensive farming which, however, suffers from both the scarcity of grass cover fallow, rangeland (12% of the total area of the municipality of Shoul) and low production of fodder crops stock market (rainfed crops) and stubble. Thing that makes farming very common in this forest-dependent. Indeed the latter contains a very important forage potential for livestock consisting of cattle, sheep and goats. The forest is also considered a source of wood energy as the energy consumption of the area is based primarily on a significant demand for fuel. The importance of the area occupied by the forest within the territory of the study area has favored the development of a large herd of cattle. Dietary constraints on farm are that the forest contributes to feed demand even if it exceeds its production capacity. Thus, the forest ecosystem which has great potential fodder is almost all year requested by users breeders flocks (Laaribya et. al., 2013a, b).

4.1. Key Activities by gender

Survey results show that there is a division of labor by gender within and outside the household. And that the activities different from one season to another (Table 4). This allows us to provide more information on the socioeconomic status of women in the study area.

Table 4. The division of labor by age and gender

Age	Sex		Activities	Season			
				Winter	Spring	Summer	Autumn
7 - 15 years	Male	in school	-Schooling -Pasture	++++	++++ +	+++	++++ +
		is not in school	- Pasture - Help-collection timber - Water Supply	++++ ++++	++++ ++	 ++	++++ ++
	Female	in school	--Schooling - Help-collection timber - Housework	+++ +	+++ ++ +	 ++ +	+++ ++ +
		is not in school	- Pasture - Collection of wood- - Water Supply - Housework - Help-farm work - Crafts	++++ +++ ++ ++	+ ++++ ++ +++	+ ++++ ++ +++ ++	++++ ++++ ++ ++
15 - 60 years	Male		-Agriculture -Breeders -Marketing (Trade) -Migration	+++ ++++ +++	+++ ++++ ++	+++ ++++ +++	+++ ++++ +++
	Female		- Domestic work - Education of children - Collection of wood - Water Supply - Agriculture - Breeders (search for fodder, food, cleaning) - Small-farm - Crafts	++++ +++ +++ ++	++++ +++ +++ +++ ++	++++ +++ ++ +++ +++ ++	++++ +++ +++ +++ ++
> 60 years	Male		- Agriculture - Breeders - Marketing (Trade)	 +++ 	 +++ 	+++ +++ +++	+++ +++
	Female		- Housework - Crafts - Small-farm	++ ++ 	++ ++ ++	++ ++ ++	++ ++ ++

4.1.1. *The main male activities*4.1.1.1. *Livestock*

Farming is practiced by almost all heads of households. The herd now consists of cattle, sheep and goats. The cattle and semi-intensive. The goats and sheep is usually extensive and is based primarily on rangelands, including the forest and stubble summer farms. So it's is a mobile livestock whose livestock is entrusted to the shepherd children (boys), while men are responsible for the marketing of dairy and livestock, and food supply for the latter during periods of scarcity (Table 5).

Table 5. Consumption of firewood per household by the shift frequency

Shift frequency to the forest	Sehoul		Sidi Abderrazak	
	Normal period	Cold period	Normal period	Cold period
	Average quantity (Kg)	Average quantity (Kg)	Average quantity (Kg)	Average quantity (Kg)
1 time / week	37	70	44	86
2 time / week	22	40	28	46
Daily	84	12	10	16
Annual average	3 224		3 848	

Source: Surveys 2013-2014

4.1.1.2. *Agriculture*

Men to the women doing the plowing, sowing, harvesting, irrigation and threshing grain by animals such as mules and donkeys.

4.1.1.3. *Migration*

Migration is one of the most important aspects of population mobility in the area of Maamora. The imbalance between the potential of the area and the growing demand of its population which is reflected in the lack of local resources drive men, from the end of the season of tillage and planting (fall), to leave their homes in search of work to generate extra income to meet the needs of their families. The rural exodus of the male has a negative impact on the lives of women. They then have full responsibility for the children (food, care, etc.). And domestic and agricultural activities.

3.3.2. *The main women's activities*

Analysis of the seasonal calendar shows that there is an overload of women's activities throughout the year. In addition to domestic work (breeding activities: cooking, raising children), the woman filled with other activities that are related to production (livestock, small livestock, agriculture).

3.2.2.1. *Domestic activities*

It is a role traditionally assigned to women: cooking, education, child care, dishwashing, cleaning, etc. These are the daily activities of young women throughout the year.

3.2.2.2. *The water supply*

The soils in this study contain a large number of water sources. This activity is accomplished primarily by school girls during the different seasons of the year. However, given the scarcity of water in summer, young women and even boys can participate.

3.2.2.3. *The collection of wood*

It is an activity essential to meet the fuel needs of the household. Indeed, the wood collected is used for heating in cold weather, for baking bread and meals etc. The amount of wood collected and frequency of travel vary by season, household needs and the proximity of the forest. These are virtually the women and girls out of school first that handle this task (Photo 1).



Photo 1. Forest and Rural women

3.2.2.4. *The activities of agro-pastoral production*

The small farm is an income generating activity for women very important. They are thing that justifies his practice by almost all of them. They allow them to cover their medical expenses and participate in meeting the family needs. They are in fact, responsible for the production of chickens, turkeys, rabbits and eggs (Alaoui et. al., 2012).

They also participate in the rearing of sheep, cattle and goats. They take care of mowing, watering, feeding livestock, cleaning the stables and milking cows.

The contribution of the young woman and the girl is very important in crop management. For cereals, which are the main agricultural speculation, they provide weed control in spring and harvest by hand or with a sickle in the summer. They also participate in the planting and harvesting of legumes (beans, chickpeas and peas).

3.2.2.5. *The crafts*

Handicrafts are the most desired (weaving, preparation of wool) for all women in the study area. But, this type of activity is not provided a source of income for women, since the products are made primarily for the use of their own homes. These works often have a difficult threat to women's health, and preventing it from enhancing other activities typically female.

4. *Contribution of women in decision making*

According to interviews conducted with women, it was found that they are socially excluded from decision making. Their participation is generally limited to consultation rather than decision making. Women do not care or the purchase or sale of farm produce including products that run with the small animals. So this is an area that is up to the man and the common effort of all family members, including women are managed by the head of household. As a woman gives birth, it remains studded, but it advances in age, the more it acquires a certain status, and it also gains the freedom to visit neighbors and family (Figure 2).

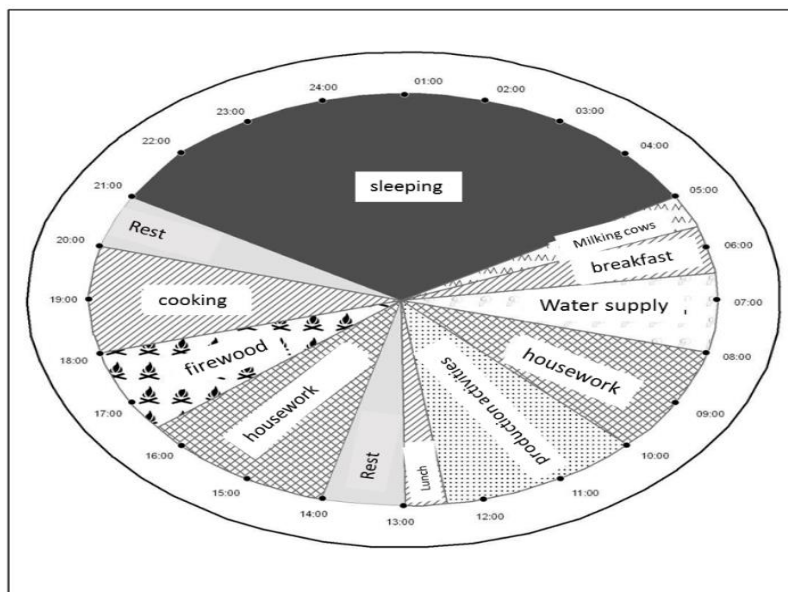


Figure 2. Daily Activity Clocks for women in Maamora (Study Area)

4.1. Role of Women in the degradation and natural resource management

A Maamora, as in many parts of Morocco, the different vegetation types, namely: the forest, crop areas and others are severely affected. This unfavorable vegetation is harmful consequence. Women are a permanent family labor and are the most active fraction in the area, as they are in cattle, sheep and goats. They are present in all phases of agricultural work which they are responsible (plowing, sowing and harvesting) and processing activities in agriculture. They also carry most of the housework, water and collecting firewood (Laaribya et. al., 2010). That is why they are considered the principal agent of natural resource degradation. They are also the first to suffer the consequences of the loss of their land because they are the group most poor and most vulnerable. This vulnerability refers to the insecurity and all forms of risks they face daily. Because of this, and therefore the concept of sustainable development, closely linked to concerns about natural resources that must be carefully managed to avoid compromising the potential of future generations, we can say that the involvement of women, as well as the men in decision-making, appears very useful for the development of natural resources (Laaribya et. al., 2011).

4.2. Requirements and expectations of women of Maamora

Positively, it was noted that there is a group of women who voice almost open to approach the equality sought to man. Through the results of surveys of women and girls in the study area, it is clear that they expect a decision in association management, production, and management. It is also clear that the possibilities of improving the conditions of women and girls are relatively large and focus on the following:

4.2.1. Improving living conditions of women and girls through:

- a. The use of other energy sources by introducing butane for cooking, and solar energy for lighting and television;
- b. Improving the availability of drinking water by building more water points within the soils and installation of suction pumps;
- c. The schooling of girls, and the fight against illiteracy for large in general, by building more schools in the different soils studied;
- d. Contribution to improving the health of mother and child through the installation of health services in the vicinity of land for primary health care, and develop more space for maternity have safe deliveries;
- e. The creation of multi-purpose centers of vocational training to develop the craft skills of the female population, and foster communication and cohesion between the different components of the soil.

4.2.2. The integration of women in economic activities and production by:

- f. The creation of sources of income for women through the creation of associations and women's cooperatives to develop and promote activities of crafts and small animals;
- g. Strengthening the training of women in the management of natural resources and environment;
- h. The integration of women in various development projects and the sustainable management of natural resources, by involving them in extension activities of agricultural techniques and methods;
- i. encourage the active participation of women in the planning, implementation, monitoring and evaluation.

4. Conclusions and discussion

A diagnosis of our two commons in Maamora was made on the basis of the method gender approach, an essential component of the participatory approach, based on surveys and participatory workshops with groups of women. It appears that the woman has a direct relationship with the environment and impacts on natural resources. They assume important responsibilities in the household and the farm (cooking, child rearing, care, cattle, sheep and goats, gathering wood, milking, plowing, sowing, harvesting), and with his expertise is a key player in the development of the area. However, it is socially excluded from decision making. His participation is generally limited to consultation rather than decision making. Something that does not guarantee equality of opportunity and equity in access to resources, services, property, income and control of power. Therefore, the wife of the town of Maamora is the most vulnerable category, and the most affected in terms of literacy, schooling, health, poverty, and income.

The objective of local development of the study area and the conservation of natural resources can not achieved without the integration and effective participation of women in sustainable development projects and involvement, as well as rights in the decision process. Integrate women in development, it also facilitate their lifestyle by the proposed development activities on improving the living conditions of women and girls, and the integration of women in economic activities and production. The full participation of women and men, partners involved in community development, is an investment that can ensure sustainability and success of all the activities proposed. Strengthening the role of women in industry segments, will help to promote activities that generate wealth locally. Also

improving their situation requires encouraging the education of girls, the organization of courses of illiteracy and the creation of female cooperatives for crafts or small livestock (poultry, rabbit breeding), to improve their returned.

References

- Alaoui, A., Laaribya, S. Gmira, N., Faiçal B. 2012. Le rôle de la femme dans le développement local et la préservation des ressources forestières Cas de la commune de Sehoul au Maroc-*Revue de la forêt méditerranéenne* XXXIII, n° 4, décembre 2012.
- Laaribya, S. 2006. Il faut sauver la forêt de la Maamora (Maroc), *Revue de la forêt méditerranéenne* TXXVII N°1, Mars 2006 P.65-72 (France).
- Laaribya, S., Gmira, N., Alaoui, A. 2010. Towards a coordinated development of the forest of Maamora (Morocco), *Journal of Forestry Faculty- Kastamonu University, Turquie*, 10 (2) 172 - 179.
- Laaribya, S., Gmira, N., Alaoui, A. 2011. La forêt de la Maamora au Maroc, Un enjeu essentiel de développement pour les populations locales, *Revue Sylva Belgica – pages 32 à 37 Numero Juillet Aout – 118-4/2011*.
- Laaribya, S., Alaoui, A., Gmira, N., Paolo, T., Paolo, E. 2013a. I prodotti forestali non legnosi, un'occasione di sviluppo locale. Il caso della foresta della Maamora (Marocco)" – *Revue-INTER NOS –Quaderni della Sezione di Botanica et Geobotanica Applicate - PISA University (Italie)*.
- Laaribya, S., Alaoui, A., Gmira, N. 2013b. L'évaluation de la pression pastorale dans la Maamora - Parcours forestiers et surpâturage- *Nature & Technology" Journal University Hassiba Benbouali of Chlef, Algeria*.
- Stenger, A. 2006. A protocol and database for the Environmental Valuation of French/European Forests. Nancy, September 26-27, 2006. Laboratory of Forest Economics. UMR INRA/ENGREF, Nancy.
- Tyrvaäinen L., Mäkinen K., Schipperijn J. 2007. Tools for mapping social values of urban woodlands and other green areas, *Landscape and Urban Planning* 79, 5-19. .

(Received for publication 30 August 2015; The date of publication 15 August 2017)