The Hunger Games: Examining the Securitisation of Food in the Peoples Republic of China and its effect on Chinese Foreign Policy

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Executive Summary

This thesis examines the way in which the need for food security has shaped the foreign policy of the Peoples Republic of China. It uses securitisation theory to define how food security (or lack thereof) can threaten a state's societal, political, military, economic and environmental security. In addition to securitisation theory, it is necessary to understand the unique history that China has with food insecurity. This provides a background of how, through decades of hunger and starvation, the need for food security has been ingrained into the very psyche of the Chinese people and government. With an understanding of the importance of food security, as well as China's unique history of food security, various elements of current Chinese foreign policy can be explained. In particular this thesis focusses on how food security has influenced China's activities in the South China Sea and its One Belt, One Road initiative, as well as its relationships with both the developing and developed world. By using food security as a lens of analysis, the rationale of various policy decisions becomes clear. This thesis concludes that a thorough understanding of food security is necessary to effectively appreciate China's current foreign policy and more importantly understand future policy decisions.

'I certify that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.';

Introduction

In China there is a saying that "Food is Heaven", this underlines the importance placed in food by both the Chinese people and its leaders. The Chinese people have a particular appreciation for food security due to their unique history with it. After all no other country in recent history has shared the same experiences with famine and hunger that China has had.[1] Throughout the last century tens of millions of people died from famine in China. Indeed hunger, privation and ultimately starvation have been branded into the cultural and political consciousness of the Chinese people and Chinese Communist Party.[2]

As China grows wealthier, food consumption and diet are undergoing a massive transformation – one that will shape China's food security landscape for the coming decades. With the explosive growth of China's middle class who are demanding a more meat based diet[3], coupled with shrinking arable land and an overall increase in consumption, has meant that China is no longer able to domestically supply the agricultural products its people demand.[4] As such China is increasingly looking outside its borders to maintain food security. In particular it is looking at area's rich in food resources or successful agricultural industries and systems, to trade with, invest in or develop partnerships with.

As a major power and the second largest economy in the world, any foreign policy decision China makes will undoubtedly have a large impact on the countries around it as well as the wider international system. The purpose of this thesis is to provide an insight into food security in China and how it is currently influencing Chinese foreign policy and how it might influence it going into the future.

The first chapter will examine the Copenhagen School of Securitisation. How an issue moves from political debate to one that requires extraordinary measures to combat a threat to

[1] Zhou, Z., 2010. Achieving food security in China: past three decades and beyond. *China Agricultural Economic Review,* 2(3), pp. 251

[2] Dikötter, F., 2010. *Mao's great famine : the history of China's most devastating catastrophe, 1958-1962.* New York: Walker & Co, pp.333

[3] Barton, D., Chen, Y. & Jin, A., 2013. *Mapping China's middle class.* [Online]
Available at: http://www.mckinsey.com/industries/retail/our-insights/mapping-chinas-middle-class
[Accessed 1 December 2016]

[4] Zhou, Z; Tian, W; Wang, J; Liu, H; Cao, L; 2012. *Food Consumption Trends in China April 2012,* Canberra: Australian Government Department of Agirculture, Fisheries and Forestry

security – a process called securitisation. It will then look at food security, firstly as defined by the Food and Agricultural Organisation (FAO) and then by how China itself defines food security – which is a function of China's own unique history and experiences. Finally it will look at how food can threaten the various security sectors as described by the Copenhagen School.

The second chapter focuses on a historical analysis of food security in China. Beginning with the Mao era, in particular examining the various stages of the Chinese Civil War, Communist Revolution, Great Leap Forward and Cultural Revolution, it looks at how food was largely mismanaged during the early stages of the Peoples Republic of China, and how the largest man-made famine came about. It then looks at Deng and his pragmatic economic reforms. Deng managed to turn China from a fragile, developing country fraught with social and institutional problems as a result of the Mao era, into one of the fastest growing economies in the world. Deng's reforms raised the standard of living and importantly increased food security for hundreds of millions of Chinese people. Finally this chapter looks at how China has continued on from Deng's reforms, and how its food policies have changed over time, as it moved into the World Trade Organisation (WTO) and eventually abandoned the goal of food self-sufficiency, instead relying on trade to cater for a growing middle class' desire to move away from traditional grains to a protein rich diet.

After examining China's history of food security, the third and fourth chapter investigate how the need to ensure food security through foreign policy is manifested. They are split thematically, the third chapter focussing on one unilateral and one multilateral (albeit driven by China) example of China's foreign policy. Chapter three looks at China's actions in the South China Sea, where it is endeavouring to gain control of the region to (in part) ensure access to fisheries and protect trade that passes through the shipping lanes in the area. The second case study looks at the One Belt, One Road (OBOR) initiative. The OBOR initiative is a massive project aimed at developing infrastructure across Eurasia with the aim of increasing economic cooperation. Food security benefits from the OBOR initiative though increased opportunity for trade in food, and allows for a greater diversity of trade routes into China, thereby reducing dependence on any one particular trade route.

The fourth chapter focusses on China's relationships with countries and organisations in the developing and developed world. In particular it looks at how China is investing in the agricultural systems of both Africa and South America. This investment in the developing countries has the potential to return dividends in the form of increased influence in these regions for China as well as the possibility of greater agricultural trade in the future. While in the developed world China is increasingly investing in big agri-businesses which allows it access to greater levels of intellectual property. It is also collaborating with numerous countries around the world with proven success in agriculture, such as Canada and Australia, to increase agricultural research and development. Both these endeavours will assist in increasing China's food security by making its own agricultural systems more productive.

Chapter 1 – Securitisation, Food Security and Food Securitisation

1.1 Introduction

No concept within International Relations carries more weight or commands more importance than an actors "security". Indeed it is the survival of agents (sovereign states) that has become the dominant explanatory tool for understanding behaviour in International Relations.[5]

This chapter seeks to define how food security can impact a state's overall security. And as such define the very reasons why ensuring food security is so important. To do so, it will first look at the discipline of security studies, focussing on Securitisation theory. Securitisation theory is a useful tool of analysis due to the way it breaks down security into various security sectors, allowing for a sectorial analysis of a certain security threat.

Following from this, the chapter will look at various definitions of food security, in particular the Food and Agricultural Organisations (FAOs) definition, as well as a Chinese specific definition. These definitions, combined with securitisation theory's sectorial analysis will allow for a comprehensive investigation of the various ways in which food insecurity can threaten a state's overall security situation.

1.2 Security Studies

Realist theory has been the dominant approach to security studies. This led to a view that security studies was predominantly about the study of military conflict.[6] This was partly due to the Cold War, where security studies became synonymous with strategic studies. The physical security of the state was paramount, it was principally threatened by inter-state conflict, as such security was gained through military might.[7] Focussing ones view on strategic studies provides only a limited view of security studies and neglects a range of other threats that can affect the security of the state. Security Studies now encompasses an increasingly broad range of issues which include, but are not limited to: environmental

[5] Collins, A., 2013. Introduction: What is Security Studies. In: A. Collins, ed. *Contemporary Security Studies.* Oxford: Oxford University Press, pp. 1
[6] Walt, S., 1991. The renaissance of security studies. *International Studies Quarterly,* 35(2), pp.212
[7] Collins, A., 2013, pp. 2

security, economic security, societal security, cultural security, health security, water security and food security.[8]

In the late 1980s and early 1990s a sea change swept over security studies, moving the spotlight off strategic studies - based in the bi-polar security complex of the Cold War. Conventional theories of security were widely seen as inadequate to account for the new landscape of security issues and actors, which resulted in a turn towards a predominantly constructivist theory which placed an emphasis on social theories of security, as well as language and communication.[9]

When examining security it is important to consider a number of questions. Firstly what is being "secured" – this is called the referent object.[10] In traditional security studies this was predominantly the nation state, a somewhat easily definable object. However since the concept of security has expanded it can include more abstract referent objects such as the international system, society or culture. Secondly how is the condition of security achieved? Is it protection from enemies, foreign and domestic? Is it economic stability, or environmental sustainability or ensuring supply of natural resources? Each of these things are security goals, none of them are easy to achieve. Finally it is crucial to consider how ideas about security develop. How they become part of public debate and then become institutionalised in public policy, governments and organisations. Do security ideas simply develop from objective threats and conditions that are intrinsic in an anarchic system? Are they created within, the product of a notion of self and feared others? Or are they socially constructed, the result of a discussion between what is observed and what is imagined.[11]

Of these three questions - what is the referent object, how is security achieved, and how security ideas develop - it is the last questions that is the least understood, but perhaps the most important of them all.[12] Buzan describes that using the word *security* is a "powerful tool in claiming attention…It also helps establish a consciousness of the importance of the

[8] Cavelty, M. D. & Mauer , V., 2010. *The Routledge Handbook of Security Studies.* New York: Routledge
[9] Munster, R. v., 2012. *Securitization.* [Online]
Available at: http://www.oxfordbibliographies.com/view/document/obo-9780199743292/obo-9780199743292-0091.xml; Buzan, B., Wæver, O. & Wilde, J. d., 1998. *Security: A New Framework for Analysis.* London: Lynne Rienner Publishers, pp.2; Burgess, J. P., 2010. Introduction. In: J. P. Burgess, ed. *The Routledge Handbook of New Security Studies.* New York: Routledge, pp.2
[10] Munster, R. v., 2012. *Securitization.* [Online]
[11] Lipschutz, R., 1998. On Security. In: R. Lipschutz, ed. *On Security.* New York: Columbia University Press
[12] Ibid

issues so labelled in the minds of the population at large".[13] Consequently it is of great importance who gets to decide how security ideas are developed, what makes it onto the security agenda and how these issues should be dealt with. This is where Securitisation theory becomes useful, as it provides a framework through which the construction of a security threat can be examined and the aforementioned questions can be answered.

1.3 Securitisation

Securitisation theory emerged from the Conflict and Peace Research Institute of Copenhagen and is part of a school of academic thought known as the Copenhagen School; it is predominantly represented in the writings of Barry Buzan, Ole Wæver and Jaap de Wilde.[14] They published a book in 1998 titled *Security: A New Framework for Analysis* in 1998 to serve as a primary source for the Copenhagen School. The book was constructed around two primary principles, firstly Buzan's sectorial analysis of security, and secondly Wæver's concept of securitisation, both of which will be examined. The book stated that its main purpose was to 'argue against the view that the core of security studies is war and force and that other issues are relevant only if they relate to war and force…Instead, we want to construct a more radical view of security studies by exploring threats to referent objects, and the securitisation of those threats, that are non-military as well as military."[15] The primary concern within the School is how security 'works' in world politics, which resulted in the development of the concepts of securitisation and de-securitisation, as well as expanding security into different sectors of the state and society beyond a purely military focus.[16] The Copenhagen School's theory is very much a 'speech-act theory' of security, which focuses on how security issues are constructed through language.[17]

Like most other security theories, security to the Copenhagen School security is about survival. However instead of assuming it is the survival of the state it asks the question 'security for whom or what?' with the answer referring to the referent object, something

[13] Buzan, B., 1991. *People, states, and fear : an agenda for international security studies in the post-cold war era.* 2nd ed. Boulder: Lynne Rienner, pp.370
[14] Emmers, R., 2013. Securitization. In: A. Collins, ed. *Contemporary Security Studies.* Oxford: Oxford University Press, pp. 131; Buzan, B., Wæver, O. & Wilde, J. d., 1998.
[15] Buzan, B., Wæver, O. & Wilde, J. d., 1998, pp.4
[16] Emmers, R., 2013, pp. 131; Özcan , S., 2013. *Securitisation of Energy through the lenses of the Copenhagen School.* Orlando, West-East Institute
[17] Burgess, J. P., 2010, pp.2

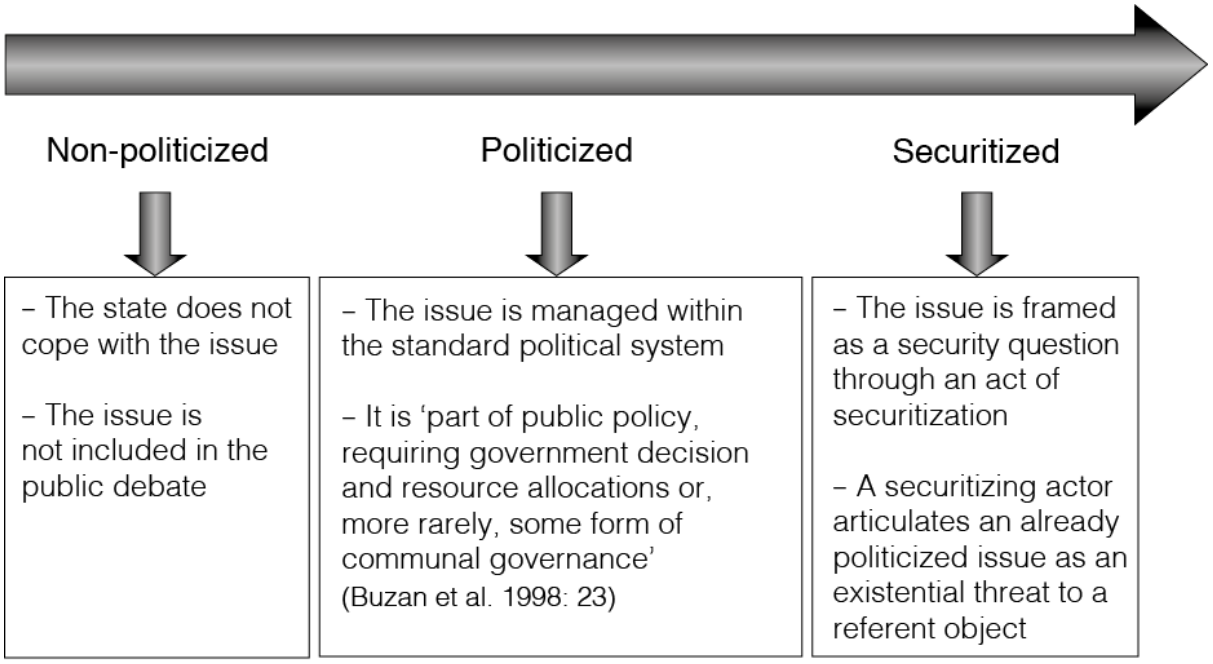
that is threatened and needs to be secured, thereby representing the need for a securitising act.[18] The Copenhagen School doesn't discount the traditional military element of security, rather it adds additional categories. Five general categories of security are identified by the Copenhagen School, these include: military, environmental, economic, societal and political security – it is worth noting that four out of the five sectors of security account for non-military threats.

The dynamics of each security category are determined by a securitising actors and referent objects. The securitising actor is defined as 'actors who securitise issues by declaring something – a referent object – is existentially threatened'[19] and can include political leaders, bureaucracies, governments, lobbyists, and pressure groups.[20]Referent objects are 'things that are seen to be existentially threatened and that have a legitimate claim to survival'.[21] As such the referent object and the kind of existential threat it faces will vary across each security category but can be the state (military security); national sovereignty, or an ideology (political security); national economies (economic security);collective identities (societal security); species, or habitats (environmental security).[22]

An issue becomes securitised by going through a two stage process, as seen in Figure 1. Securitisation theory states that an issue can be non-politicised, politicised or securitised.

[18] Buzan, B., Wæver, O. & Wilde, J. d., 1998, pp.21
[19] Ibid, pp.36
[20] Ibid, pp.40
[21] Ibid, pp.36
[22] Buzan, B., Wæver, O. & Wilde, J. d., 1998; Emmers, R., 2013, pp.132

Figure 1: Securitisation Spectrum (Source: Emmers, R., 2013, pp.133)



An issue is non-politicised when it is not part of public debate and the state does not consider taking any action in regards to it. An issue becomes politicised when it is managed within the standard political system. A politicised issue is one that is part of public policy, which requires attention from the government and the allocation of resources.[23] Finally, an issue becomes securitised when the issue is presented as an existential threat which requires emergency measures outside of what is considered normal political procedure.[24] The movement of an issue along the Securitisation Spectrum, from politicised to securitised is considered an act of securitisation.

For an act of securitisation to occur a securitising actor (the government, political elite, civil society) frames an already politicised issue as an existential threat to a referent object (the state, national sovereignty, the economy or a particular ideology). The securitising actor asserts that it must go beyond the usual political process to deal with the threat. Buzan,Wæver and de Wilde, argue that securitisation 'is the move that takes politics beyond the established rules of the game and frames the issue either as a special kind of politics or

[23] Buzan, B., Wæver, O. & Wilde, J. d., 1998, pp.23; Emmers, R., 2013, pp. 133
[24] Buzan, B., Wæver, O. & Wilde, J. d., 1998, pp.24

as above politics" [25], as such securitisaion is essentially a more extreme version of politicisation.

The success of a securitising act largely depends on the power and influence of the securitising actor, consequently this actor is often the state and its elites.[26]This is because for an act of securitisaion to be succesful the securitising actor must convince a certain audience (the public, politicians, military officers, other elite) that a referent object is existentially threatened. Only once this has been done can an act of securitisation be completed. Once this two stages process has been completed, extraordinary measures can be applied. Due to the urgency of the now accepted existential threat to security, constituencies will allow the use of actions outside that of the normal political process.[27]

The two-stage process of securitisation revolves around a 'speech act'. The basic idea of a speech act is that certain statements do more than merely describe a given reality, and therefore cannot be judged as true or false. Rather a speech act realises a certain action, they do things; they are 'performatives' as opposed to 'constatives' which merely report states of affairs and which are subject to truth and falsity tests.[28]

Emmers describes a securitising speech act as 'the discursive representation of a certain issue as an existential threat to security'.[29] The speech act is the starting point for any act of securitisation, by uttering 'security' a securitising actor moves a particular development into a specific area, thereby claiming a special right to use whatever means necessary to block it.[30] An issue can become a security question through a speech act alone, regardless of whether it poses a legitimate existential threat in material terms. To convince a given audience, the securitising actor uses language to articulate the issue in security terms, this is also known as the language of security. The securitising act is successful if the desired audience is convinced of the existential threat to the referent object.[31] As such what

[25] Buzan, B., Wæver, O. & Wilde, J. d., 1998, pp.23
[26] Collins, A., 2005. Securitization, Frankenstein's Monster and Malaysian education. *The Pacific Review,* 18(4), pp. 567
[27] Emmers, R., 2013, pp.134
[28] Balzacq, T., 2010. Constructivism and Securitisation Studies. In: M. D. Cavelty & V. Mauer, eds. *The Routledge Handbook of Security Studies.* New York: Routledge, pp. 61
[29] Emmers, R., 2013, pp.134
[30] Wæver, O., 1998. Securitization and Desecuritization. In: R. D. Lipschutz, ed. *On Security.* New York: Columbia University Press
[31] Emmers, R., 2013, pp.135

constitutes a threat is entirely subjective, and is based on the securitising actor effectively creating a shared understanding amongst their target audience of what poses a danger to security.

In regards to food security it may not be necessary for an issue to go through the complete securitisation process. Due to the very nature of the word "food security", any issue that is considered a food security issue is already securitised.

1.4 Food Security & Food Securitisation

It is important to draw a distinction between what is Food Securitisation and what is Food Security. Food Securitisation is taking food as a political issue and turning into a security issue. Structuring the issue such that it appears, either real or imagined, to threaten a referent object in a particular security category. Where food securitisation can be subjective, food security is an *objective* state of being, where certain objective conditions must be satisfied to achieve food security - either a state (or people) have food security or they do not. It is important to realise that while food securitisation and food security are two different things, achieving the objective state of food secure will be the key goal of any extraordinary measures invoked as a result of the securitisation process.

Food Security is defined by the Food and Agriculture Organisation of the United Nations (FAO) as:

> when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life.[32]

It is widely accepted that there are four primary elements to Food Security which are: food availability, food access, utilisation and stability.[33] Food availability refers to food supply and trade of food either through domestic production or imports; it considers not only the quantity but also the quality and diversity of food. Food access covers an

[32] Food and Agriculture Organization of the United Nations, 2003. Chapter 2. Food security: concepts and measurement. In: *Trade Reforms and Food Security* . Rome: FAO, pp.29

[33] Food and Agriculture Organization of the United Nations, 2006. *Policy Brief - Food Security.* [Online] Available at: ftp://ftp.fao.org/es/ESA/policybriefs/pb_02.pdf
[Accessed 24 July 2016]; Food and Agriculture Organization of the United Nations, 2009. *Declaration of the World Summit on Food Security,* Rome: FAO, pp.1

individual's economic and physical access to appropriate food for a nutritious diet. Utilisation covers the healthy utilisation of food through adequate (and diverse) diet, clean water, sanitation and health care to achieve a state of nutritional well-being where all physiological needs are met. Stability refers to a population, household or individual being food secure, meeting the above three points, at all times. Additionally to achieve food stability, the aforementioned groups should not be at risk of losing food security as a consequence of sudden shocks (economic shocks, climate crisis) or cyclical events (seasonal food insecurity). [34]

It is worth mentioning that while the FAO has its definition for food security, China has its own, if somewhat informal, definition of food security. In China food security is often synonymous with food self-sufficiency or rather grain self-sufficiency.[35] This is a function of China's own culture and history, and will be examined in further detail in upcoming chapters.

Before examining how food security can threaten various security sectors, it is worth considering where food security lies within securitisation theory. The Copenhagen School states that an issue becomes securitised when it is moved beyond being a political issue. Food Security by its very title is an issue that exists from its conception as an issue that has been securitised. While facets of food security may be part of the political discourse, such as agriculture or food aid, as soon as a politician uses the word 'food security' they are implying that there exists a threat to security based around food. This however does not mean there is no need for securitisation theory in regards to food security. The theory enables us to examine how food security affects various security sectors, and politicians or securitising actors must still convince an audience that a threat to a given security sector exists as a result of food (in)security, however this may prove simpler than other issues due to the inherit connotations attached to the term *food security*.

[34] Food and Agriculture Organization of the United Nations, 2006. *Policy Brief - Food Security;* Australian International Food Security Research Centre, 2016. *Food security and why it matters.* [Online]
Available at: http://aciar.gov.au/aifsc/food-security-and-why-it-matters
[Accessed 24 July 2016]

[35] Jiang, T., 2008. WTO accession and food security in China. In: C. Chen & R. Duncan, eds. *Agriculture and Food Security in China: What effect WTO accession and regional trade arrangements?.* Canberra: Asia Pacific Press, pp. 184

In regards to food securitisation, food insecurity is a considerable threat to most of the security categories set out by the Copenhagen School. For instance political security can be threatened by food insecurity.[36] A nuanced relationship exists between food insecurity and violence; increases in food insecurity can be a source of grievances which can motivate participation in rebellion and increased levels of unrest, which can threaten the existing political system.[37] Indeed throughout the developing world, during times of famine or extreme hunger, civil obedience is not usually counted on. A hungry population may negatively impact social stability as 'food insecurity, especially when caused by higher food prices, heightens the risk of democratic breakdown, civil conflict, protest, rioting and communal conflict'.[38] With regards to urban unrest, higher consumer prices in particular food and fuel, are associated with increased levels of urban protest and rioting.[39] One prime example of this was during the global food price crisis of 2007-2008, the rise in food prices throughout North Africa and the Middle-East contributed to a wave of protests which toppled the regimes of Tunisian president Zine El Abidine Ben Ali and Egyptian president Hosni Mubarak, in what became known as the Arab Spring. It is worth noting that the link between food insecurity a regime change are highly context specific and were also dependent on existing political institutions, economic development, social welfare, and demographic pressures. [40]While China is in a significantly different position to these states, their fate does serve as a cautionary tale of what food insecurity can contribute to.

Cultural security can also be threatened by food insecurity. During times of limited food, the question may be asked who gets the limited resources or food security for whom? Food may also be used as a weapon by those who control the food against other communities and/or cultures they may see as a threat. In China the eastern and central regions often experience higher levels of food security then the west and south-west.[41] Additionally the

[36] Fox, N., 2015. Is a Hungry Dragon a Peaceful Dragon: food security implications for China?. *Indo-Pacific Strategic Digest*

[37] Brinkman, H. -J. & Hendrix, C., 2013. Food Insecurity and Conflict Dynamics: Causal Linkages and Complex Feedbacks. *Stability: International Journal of Security and Development,* 2(2), pp. 2

[38] Brinkman, H. -J. & Hendrix, C., 2011. *Food Insecurity and Violent Conflict: causes, consequences, and addressing the challenges,* s.l.: World Food Program, pp.4

[39] Brinkman, H. -J. & Hendrix, C., 2013, pp. 2

[40] Ibid, pp. 2

[41] Food and Agriculture Organisation, 1998. Annex 3: Agricultural Policy and Food Security in China. In: *Poverty Alleviation and Food Security in Asia Lessons and Challenges.* s.l.:Food and Agriculture Organisation

idea of food embargoes being used against China is often thought of as a possibility due to differing cultures and ideologies between China and other major powers.[42]

Economic security can be threatened by food insecurity. If workers do not have access to sufficient nutritious food the work force will not be as productive as it could be, resulting in an overall loss of productivity.[43] This can result in a vicious cycle for the working class who, unable to access sufficient food suffer from reduced productivity which in turn can lead to reduced work and less wages, which then leads to greater degrees of poverty and food insecurity. If this cycle is not broken it can be not only damaging for the economy but could lead to the discontent that results in civil disorder. On the other hand food security, and in particular the sustained development of agriculture is essential for a successful industrial revolution and through extension, economic security. Five factors link agricultural contribution to industrial development: urban labour (through migration), sufficient food supplies for the growing industrial work force, raw materials for factories (wool, cotton etc.), exports to generate foreign exchange to import machinery, and higher incomes for those that remain on the farms.[44] Similar benefits from increasing agricultural production could also be seen to apply to a state's military. These would include sufficient food supplies to feed the military work force as well as generating revenue though the exporting agricultural products in order to import military machinery. As such policies to increase food security –in particular those focussed on increasing domestic agricultural production - have the additional benefit or flow on effect of supporting industrial development.

Military security is affected by food security as the militaries ability to defend the state could be severely impaired if there are not the food provisions to cater for its personnel. As Napoleon said "an army marches in on its stomach", as such an effective military needs an

[42] Jiang, T., 2008, pp. 184; Yang, Y., 2000. *Food Embargoes against China: Their Likelihood and Potential Consequences,* Canberra: Australia-Japan Research Centre

[43] Food and Agriculture Organisation, 2008. *An Introduction to the Basic Concepts of Food Security.* [Online] Available at: http://www.fao.org/docrep/013/al936e/al936e00.pdf
[Accessed 30 September 2016]; Food and Agricultural Organisation , 2008. *Climate Change and Food Security: A Framework Document,* Rome: FAO

[44] Brandt, L. & Rawski , T., 2008. *China's great economic transformation.* Cambridge: Cambridge University Press, pp.467-505; Huenemann, R. W., 2016. *Economic Reforms, 1978-Present.* [Online]

adequate supply and access to high quality nutritious food for it to function effectively when called upon.[45]

Environmental security is not usually threatened by food insecurity in the same way the other security sectors are. Rather the environment can be threatened by actions taken to increase food security, such as increasing production through the use of fertilisers and pesticides, or by increasing farming land through deforestation. Another way of looking at the relationship between food security and environmental security is that to achieve food security it is crucial to ensure the health of the environment, as over the long term the health of the environment is directly linked with the ability to achieve food security.[46]

1.5 Conclusion

In this chapter we have seen how the discipline of security studies has evolved from the Cold War era that focussed predominantly on strategic studies to a more holistic view of security which encompasses a range of different security threats. Out of this evolution, securitisation theory was developed by the Copenhagen School. The Copenhagen School analyses security through a lens of how a particular issue moves from being politicised to being securitised – a move which allows the use of extraordinary measures to combat the threat. A particular issue is securitised when a securitising actor can convince an audience that the issue poses a threat to a referent object in one of the security sectors – political, societal, military, economic and environment – and is worthy of extraordinary measures.

Securitisation theory is useful for analysing how food security impacts a state as it allows for the in-depth examination of the various affects it has on different security sectors. Before a proper analysis can be done it is crucial to properly define what food security is. The Food and Agriculture Organisation provides a succinct and informative definition for what food security is, and for the most part this serves as a good benchmark for achieving food security. However China has its own definition of food security which is influenced by its

[45] Encyclopedia of Food and Culture, n.d. *Food as a Weapon of War.* [Online]
Available at: http://www.encyclopedia.com/food/encyclopedias-almanacs-transcripts-and-maps/food-weapon-war
[Accessed 5 October 2016]
[46] World Food Programme, 2016. *Climate Impacts on Food Security.* [Online]
Available at: https://www.wfp.org/climate-change/climate-impacts
[Accessed 4 October 2016];

own history and culture – this definition will tend to inform China's decisions in combatting food insecurity as much (if not more so) than the FAO's definition.

Varying definitions aside, it is clear that the loss of food security has a significant impact on each security sector. Food insecurity can be a contributing factor in civil unrest due to hunger which can threaten the existing political system, or increase cultural tensions due to insufficient food being distributed between different communities. It can impact the economy through reduced worker productiveness if the workers are suffering from chronic hunger or malnutrition; similarly a state's military cannot function effectively if they are not provided the food that fuels their bodies. Finally environmental security can be put at risk by actions to increase food production and food security is jeopardised by a lack of environmental security.

A thorough analysis of how an issue can affect the security of a state requires a theory which provides a rounded view of varying the varying factors in play to achieve security. Securitisation theory does just that, providing five different security sectors through which to analyse a particular issue. Food insecurity impacts each security sector as such constitutes a very real threat to a state's security.

2.1 Introduction

No country has had such a long history with famine and hunger as China.[47] Over the long course of China's history famines are not uncommon, and they have left an indelible mark on China's culture. Between 108 BC and 1911 AD there were 1828 recorded famines or nearly one per year spread throughout China's numerous provinces.[48] All in all untold millions have died. The most recent, and perhaps most catastrophic famine took place between 1959-1962 and many in China's society still remember this catastrophic famine where tens of millions of Chinese perished due to starvation.[49] Many more Chinese have bitter memories of the malnutrition and starvation of the Cultural Revolution. For the purpose of examining food securitisation in China, the progress and development of food security in modern China (post-civil war) must be examined. This development will be examined from the birth of the People's Republic of China, in the Chinese Communist Revolution to the present day.

China's remarkable ability to supply enough food to feed its growing population has long been recognised.[50] Food Security in China is a very real concern for the Chinese Communist Party (CCP). China must feed one fifth of the global population while only possessing 7 per cent of the world's arable land – this land is also shrinking as a result of environmental damage such as soil erosion, deforestation and pollution of rivers and lakes.[51] This was

[47] Zhou, Z., 2010, pp. 251
[48] Mallory, W., 1926. *China: Land of Famine.* Freeport, New York: Books for Libraries Press, pp.1
[49] Dikötter, F., 2010, pp.333
[50] Food and Agriculture Organisation of the United Nations Regional Office for Asia and the Pacific, 1998. Annex 3: Agricultural Policy and Food Security in China. In: *Poverty Alleviation and Food Security in Asia Lessons and Challenges.* s.l.:FAO, pp. 115
[51] Food and Agriculture Organisation of the United Nations Regional Office for Asia and the Pacific, 1998; Horta, L., 2014. *Chinese Agriculture Goes Global.* [Online]
Available at: http://yaleglobal.yale.edu/content/chinese-agriculture-goes-global
[Accessed 28 July 2016]

highlighted in 2014 when Chinese officials reported that 40 per cent of arable land was suffering from degradation.[52]

The Copenhagen School identifies that for an issue to be securitised it must pose an existential threat to a security sector. Food insecurity has the potential to pose an existential threat to a number of security sectors. Firstly Chinese leaders recognise that a lack of a food security can quickly lead to a breakdown of civil order and that not providing food security to the people threatens the stability of the CCP. Secondly as a result of the famine and privations of the 20th Century, the Chinese people have first-hand experience of what food insecurity feels like. As such they recognise the existential threat they are exposed to when food is not secure. These two points alone demonstrate that food is securitised well beyond the bounds of a politicised issue - food insecurity is a threat to the very survival of the Chinese people and the CCP. Beyond this, as mentioned in the previous chapter, food security also threatens the military, economic security, cultural and environmental security sectors. As such throughout the history of the PRC food as a security issue has been ingrained into the political and social consciousness therefore there is no definitive securitising act, rather it has always been a securitised issue.

The purpose of this chapter is to detail how food has impacted on China's political, cultural and economic history and how it has served to shape China since the CCP came into power at the end of the Chinese Civil War. It will look at the various periods throughout the last 70 years ranging from the time of Mao, to Deng's reforms and finally to the first decade of 21st century China.

2.2 Moa Era (Chinese Civil War/ Communist Revolution 1946-1950, Great Leap Forward 1958-1961, Cultural Revolution 1966-1976):

Overview and Food Security Summary of Period:

The Chinese Communist Revolution between 1945 and 1950 was the culmination of the Chinese Civil War and the final stepping stone for the Chinese Communist Party's ascent to

[52] Patton, D., 2014. *More than 40 percent of China's arable land degraded: Xinhua.* [Online] Available at: http://www.reuters.com/article/us-china-soil-idUSKBN0IO0Y720141104 [Accessed 26 July 2016]

power since its inception in 1921. As with any civil war and revolution this was a period of great turbulence for the Chinese state and its people.

The Civil War was fought between the Chinese National Party also known as the Kuomintang (the then government of China) headed by Chiang Kai-Shek and the Chinese Communist Party lead by Mao Zedong. With the eventual success of the CCP, and the formation of the Peoples Republic of China (PRC) and the exile of the Kuomintang to Tiawan to form the Republic of China.[53]

The Chinese Civil War can effectively be broken into two sections, pre-World War 2 and post-World War 2, for the purpose of this thesis, it is the second part of the civil war that will be examined and is also considered the defining feature of the Communist Revolution. The second part of the Chinese Civil War lasted from 1945to 1950 and was incredibly destructive to a country already ravaged by World War 2. While the exact numbers of casualties is imprecise, some historians put the total number of deaths as high as six million, which includes both military personnel and civilian deaths as a result of the famine and disruption due to the war, as well as those that were the victims of terror tactics used by either side.[54]

Throughout the Civil War and Communist Revolution, food security for the people of China ranged from being limited to practically non-existent. This was especially the case for citizens who lived in towns and cities that were besieged throughout the war, with reports of civilians resorting to cannibalism in various cities.[55] The lack of food security was not restricted to the civilian population, with reports that 20 per cent of the conscripts in the National Revolutionary Army (NRA) - the Army of the Chinese National Party – died from starvation.[56]

What followed the Civil War and Communist Revolution was a period of significant change for China as it became the People's Republic of China (PRC) and transitioned to socialism and industrialism. Mao's first order of business was extensive land reforms which included the complete overhaul of the land ownership system. Moving ownership away from the

[53] Encyclopædia Britannica, 2016. *China - The Late Republican Period.* [Online]
[54] Lynch, M., 2014. *The Chinese Civil War 1945-49.* Oxford: Osprey Publishing, pp.77
[55] Ibid, pp.38
[56] Ibid, pp.16

previous system where landlord's owned the land and peasants were tenants, to a system that distributed land in favour of the poor or landless peasants.[57]

The period between 1949 and 1958 was highlighted by events such as the Korean War, through which China established itself as a rising power on the world stage. It was also during this period that China invaded and annexed Tibet. The first five year plan (covering 1953-1957) was implemented. The five-year plan was a system of social and economic development planning borrowed from the Soviet economic planning. In regards to the Chinese economy and politics, this period was defined by the move towards a command economy and the 1953 wholesale institution of "general line for socialist transition", which was a program to construct a socialist China based on the Soviet Model described in Stalin's *History of the Communist Party of the Soviet Union (Bolsevik): Short Course* – a model that was based on implicit assumptions appropriate to the Soviet situation in the 1920's, however was not as compatible with 1950's China.[58] This was a significant transition away from the relatively moderate and socially inclusive policies of the "New Democracy" policy that was espoused by the CCP to gain support during the Civil War and the first four years of the PRC. This general line for socialist transition would set China on a course of catastrophic economic and social transition – delaying China's economic development for a quarter of a century - that would only end with Mao's death in 23 years later.[59]

While Mao was quick to embrace the general line for socialist transition it did not take many years for him to abandon it in favour of his own, home-grown, socialist policies. Identifying the need to increase grain production in line with population growth, Mao broke from the Soviet model in 1958, announcing a new economic program 'the Great Leap Forward' (GLF).[60] The purpose of this new economic policy was to rapidly increase China's industrial and agricultural production. This was necessary as the governments take in grain production had not increased sufficiently to support the rapid industrialisation China had been experiencing. Mao's solution to this problem was to mobilise Chinese rural labour on an

[57] Encyclopædia Britannica, 2016. *China - Establishment of the People's Republic.* [Online]
[58] Li, H.-y., 2006. *Mao and the Economic Stalinization of China, 1948-1953.* Oxford: Rowman & Littlefield Publishers, pp.186
[59] Levine, S. I., 2007. Book Review: Hua-yu Li, Mao and the Economic Stalinization of China, 1948–1953. *Journal of Cold War Studies,* 9(3), pp. 203
[60] McBeath, J. H. & McBeath, J., 2010. *Environmental Change and Food Security in China.* New York: Springer, pp.23

unprecedented scale. Integral to the GLF was the strategy of 'walking on two legs' which consisted of the intensive use of rural labour for both agricultural and industrial purposes. To achieve this, rural workers were organised into massive communes consisting of tens of thousands of workers and their families.[61] In developing agriculture the government encouraged: first, to use labour intensively to increase land reclamation (which resulted in increased deforestation and erosion), irrigation and flood control works; second, to increase agricultural productivity per unit of land through greater numbers of peasants to cultivate crops; third, to expand small scale industry to produce consumer good and support agriculture.[62] The campaign to increase industry took the form of 'backyard' iron smelters, where ordinary peasants were encouraged, with little or no guidance, to produce steel in their own backyard smelters. In 1958 over 100 million people were engaged in this primitive form of steel production which largely resulted in sub-standard, unusable steel end product.[63] To fuel these smelters peasants cut down trees where they could find them, increasing deforestation and erosion.[64]

The first year of the GLF policy saw bumper crop production, however because party cadres shifted agricultural labour to steel production crops rotted in the fields.[65] Additionally many communes falsified their production figures to show they were more 'red' then their neighbours. This over-reporting led to increased demands to supply grain to the state in 1959, that was beyond the communes' capacity to deliver on. [66] While 1958 was a good crop year, 1959 was a year of poor weather, this made meeting the increased targets next to impossible. All the while the CCP was blind to the impending disaster, maintaining high government requisitions as production was dropping. These factors culminated in what became known as the Great Chinese Famine, the most deadly famine in Chinese history.

The Great Chinese Famine was a catastrophic period for the People's Republic of China starting in 1959 and lasting until 1962. During this period food security was non-existent for the majority of the Chinese people. Many workers and peasants lacked the basic

[61] Encyclopædia Britannica, 2016. *China: New Directions in National Policy 1958-61.* [Online]; Weatherhead East Asian Institue at Columbia University, 2009. *The Commune System (1950s).* [Online]
[62] Fairbank, J. K. & Goldman, M., 2006. *China: A New History.* 2nd ed. London: Harvard University Press, pp.370
[63] Ibid, pp.371
[64] Shaprio, J., 2001. *Mao's War Against Nature.* Cambridge: Cambridge University Press; ch.2
[65] McBeath, J. H. & McBeath, J., 2010, pp.23
[66] Saich, T., 2004. *Governance and Politics in China.* 2nd ed. New York: Palgrave Macmillan, pp.40

requirements of food security of having (at all times) physical, social and economic access to quality food. It may seem paradoxical, but in many cases food was physically close at hand for many Chinese, it was however the social restrictions placed on the food that prevented workers from getting it. The social attitude, as well as the reverence and trust put towards Mao and his vision for China meant that even at the expense of feeding themselves the Chinese people followed Mao's catastrophic policies. [67] Such was the mismanagement and waste of the system that was created, grain would be stockpiled and left to rot as millions were foraging for roots or eating mud.[68]The situation was further exacerbated by how far removed the ruling elite were from the reality of the peasants. Mao had no idea and was not willing to hear of the struggles faced by the people, and that his plans were not creating his desired results. At the Lushan Conference in 1959 one of his top generals, and then defence minister, Peng Dehuai attempted to report the actual deterioration of peasant life. Mao took this as a personal attack and had Peng thrown out.[69] While the conference resulted in Peng being purged from the leadership, it also heralded a power shift away from Mao towards the more moderate Liu Shaoqi and Deng Xiaoping.

To survive many had to resort to various degrees of disobedience to the state be it stealing food, hiding produce or manipulating reports. These acts of disobedience were not restricted to the working class but extended from one end of the social spectrum to the other. All in all the period turned into a zero-sum competition of survival, which led to a breakdown of civilised society. Throughout this time it is estimated that up to 45 million people died due to a famine and its resulting societal unrest.[70]By the end of the famine, new factional alignments had appeared in the CCP that were strongly opposed to Mao. To maintain his position Mao had to turn the country upside down, in what became the Cultural Revolution.

The Cultural Revolution was a result of a number of factors; partly it was a reaction of Mao's to the aftermath of the Great Leap Forward. In the early 1960's Liu, Deng and Zhou Enlai were managing the affairs of the state and the economy and had enacted policies intended to stabilise the country after the disastrous famine. Under their guidance many of the

[67] Fairbank, J. K. & Goldman, M., 2006, pp.369
[68] Dikötter, F., 2010 pp.xi
[69] Fairbank, J. K. & Goldman, M., 2006, pp.372
[70] Dikötter, F., 2010, pp.325

policies enacted during the Great Leap Forward were reversed – Mao resented this and was determined to reduce their influence and increase his own.[71] During this time Mao withdrew from active involvement in party affairs, instead he spent his time contemplating theories of "continuous revolution".[72]Mao viewed Liu and Deng as 'capitalist roaders' who departed from communist principles.[73]

The Cultural Revolution once again plunged China into a period of extreme instability lasting from 1966 – 1969, however many argue that it lasted until Mao's death in 1976.[74] The CCP was divided and external groups such as the Red Guards increased instability, with the People's Liberation Army ultimately being called in to preserve order.[75] During this time agriculture failed to keep pace with population growth. Various initiatives were used to increase agricultural output, most only serving to damage the environment. These included the Dazhai model, which attempted to plant wheat on the Mongolian grasslands, as well as the despoliation of wetlands and encroaching on lakes and rivers to expand arable land.[76] Another initiative was the opening of a 'third front' between 1964 and 1971 in the western and southwest hinterland.[77] This was a movement of strategic industrial plants and facilities and caused considerable environmental damage to the area including air, soil and water pollution as well as considerable deforestation. Finally one of the most harmful initiatives was the forced relocation of students from the cities to the countryside to work alongside the farmers. The relocation of approximately 17 million youth only served to damage the environment – forests, wetlands and steppes were all damaged due to reclamation efforts and led to areas of desertification - they were placed in, and breed discontent amongst the youth who were bitter over their forced exile and are often called the lost generation.[78]

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[71] Mitter, R., 2004. *A Bitter Revolution: China's Stuggle with the Modern World.* Oxford: Oxford University Press, pp.213

[72] Jin, Q., 1999. *The Culture of Power: The Lin Biao Incident in the Cultural Revolution.* Stanford: Stanford University Press, pp.17-18; McBeath, J. H. & McBeath, J., 2010, pp.24

[73] Chan, S., 1979. The Image of a "Capitalist Roader" - Some Dissident Short Stories in the Hundred Flowers Period. *The Australian Journal of Chinese Affairs,* pp. 77; Tyler, P., 1997. *Deng Xiaoping: A Political Wizard Who Put China on the Capitalist Road.* [Online]

[74] Fairbank, J. K. & Goldman, M., 2006, pp.397; Mitter, R., 2004, pp. 212

[75] McBeath, J. H. & McBeath, J., 2010, pp.24

[76] Ibid, pp.24

[77] Fairbank, J. K. & Goldman, M., 2006, pp.398

[78] Gamer, R., 2003. Chinese Politics. In: R. Gamer, ed. *Understanding Contemporary China.* Boulder: Lynne Rienner, pp. 81; China Policy Institute University of Notingham, 2016. *Up to the mountains, down to the countryside.* [Online]; McBeath, J. H. & McBeath, J. 2010, pp.24

Throughout the first generation of the PRC, China experienced several disastrous policy decisions form the CCP. These choices not only imperilled the Chinese economy, environment and food security, indeed Deng Xiaoping's opinion of the period was that: 'We lost 20 years from 1957 to 1976 in the Great Leap Forward, the commune system and the Cultural Revolution. We moved backward while the rest of the world made great economic progress during those years.'[79] Most tragically however the period proved fatal for the tens of millions that perished through the famine and social unrest.

In regards to food security, it is no surprise that throughout this period (1950's-1970's) China was considered food insecure.[80] Indeed it would take a decade for China to recover. The extent of the damage caused by the disastrous policies of the Mao era is evident when examined in food security terms, for example the per capita availability of most foods in 1978 (two years after the death of Mao) was below the level of 1952.[81]

Evidence of Food Securitisation:

Throughout the 1950's and early 1960s there can be no doubt that food was securitised in certain ways. During this period, despite shortages in the domestic market, China continued to export of grain. This was in order to generate foreign exchange to cover the cost of industrial development and military expenditure.[82] Food was securitised in the sense that it was a necessary tool in achieving security in various sectors; particularly in the economic sector, food exports were crucial in maintaining the economy and in turn, the military sector, by allowing China to continue to expand its military acquisitions.

Throughout the Great Leap Forward and the Cultural Revolution Mao experienced very high popularity amongst the Chinese People.[83] This in combination with the authoritarian society of the 1950's-60's China, largely meant that the normal process of securitisation was unnecessary. Where the traditional process of securitisation sees a person in a position of authority convincing an audience of a threat to security in order to use extra-ordinary

[79] Jordan, A. & Grant, R., 1990. Explosive Change in China and the Soviet Union: Implications for the West. In: B. Roberts, ed. *The New Democarcies: Global Change and U.S. policy.* s.l.:The MIT Press, pp. 49
[80] Zhou, Z.-Y., 2014, pp. 36
[81] Ibid, pp. 36
[82] Zhou, Z.-Y., 2014, pp. 37; Smil, V., 1999. China's great famine: 40 years later. *British Medical Journal,* Volume 319, pp. 1619
[83] Fairbank, J. K. & Goldman, M., 2006, pp.369

powers, Mao did not have to go to much effort in order to convince the population (a large part of which was already enamoured with him) that what the CCP was doing, in regards to food, was necessary. Indeed many Chinese blindly followed Mao, simply supporting decisions he made without much scrutiny; however this could also have been as much a function of the limited opportunities of political participation open to the common Chinese person during that time.[84] Mao did however have to convince other members of the Politburo, however this also would not have been overly difficult, especially when Mao had the power (as demonstrated in the unfortunate case of Defence Minister Peng Dehuai) to purge members, and their supporters, who criticised his policies.

During the period of collectivisation and the commune system, China began to adopt a policy of regional and provincial grain self-sufficiency in the late 1950's. This mandate for grain self-sufficiency had the effect of leaving local governments with no other option than to force collectives to produce grain in climates and areas that were much better suited to other crops.[85]

2.3 Deng's Restructuring and Economic Reforms 1976-1989:

Overview of Period:

Mao died in 1976, after which there was a brief power struggle between the Gang of Four and Deng Xiaoping, which ended with Deng gaining power as the paramount leader of the PRC in 1978. Throughout his time as leader between 1978 and 1989, Deng promoted and launched far reaching market and social reforms, as well as some limited political liberalisation.[86]Many of the initiatives that Deng oversaw were started by Premier Zhou Enlai before his death, during the latter stages of the Cultural Revolution, such as the Four Modernisations. The Four Modernisations called for long-term industrial, agricultural, military and scientific/technological development. The plan called for the opening and liberalising the Chinese economy with the eventual aim turning China into a modern and

[84] Zhou, J., 2013. *Chinese vs. Western Perspectives: Understanding Contemporary China.* s.l.:Lexington Books, pp.114

[85] Lin, J. Y. & Wen, G. J., 1995. China's Regional Grain Self-Sufficiency Policy and Its Effect on Land Productivity. *Journal of Comparative Economics,* Volume 21, pp. 188;

[86] McBeath, J. H. & McBeath, J., 2010, pp.25; Lin, J. y., Yao, X. & Wen, G. J., 1990. China's Agricultural Development. In: C. K. Eicher & J. M. Staatz, eds. *Agricultural Development in the Third World.* Baltimore: John Hopkins University Press, pp. 482

powerful socialist country by the 21st century.[87]Initially the reforms focussed on increasing incentives for production, in particular focussing on agricultural development, increasing trade with the world, increasing foreign investment in China and improving China's infrastructure.[88]

Compared to Mao and his supporters, Deng was much more of a pragmatist, abandoning much of the political dogma that surrounded the Maoist era, focussing instead on efficiency and increasing production. Deng stated that "it does not matter if the cat is white or black, so long as it catches the mice"[89], in this he meant that political ideology did not matter so long as the people were productive. As China followed Deng's rhetoric, it moved away from its Stalinist roots towards the East Asian model of development, used successfully by Japan, South Korea, Taiwan, Hong Kong and Singapore. In doing so, the Deng leadership sought to restore the CCP's mandate through emulating the family farms, market economies, consumer goods industries and involvement in international trade of those countries.[90] In combining the CCP's communist ideology with liberalising its economy, Deng's reforms came to be known as "socialism with Chinese characteristic".

Deng's initial reforms focussed on the rural and agrarian population, who comprised 80 percent of China, roughly 956 million people in the late 1970's.[91] While China had a significant agricultural workforce, its agricultural productivity lagged behind the economies of its smaller capitalist neighbours. As such Deng's agricultural reforms saw many of the policies of the last 20 years abandoned, communes were scrapped, farmers permitted to expand private plots and the price paid by the state for grain was raised by 20 to 50 percent, giving farmers direct incentives to increase production. [92] As state control was wound back farmers were allowed to plant higher value crops, as well as engage in sideline production and sell products to local markets. Additionally some reforms throughout this period were initiated from the bottom up. Led by local leaders, the "household responsibility system" (HRS) – a return to family farms, and considered the opposite of the socialist principle of

[87] Baum, R., 1980. *China's Four Modernizations: The New Technoloigcal Revolution.* Boulder: Westview Press, pp.2
[88] McBeath, J. H. & McBeath, J., 2010, pp.25
[89] Baum, R., 1980, pp.1
[90] Goldman, M., 2006. The Post-Mao Reform Era. In: J. K. Fairbank & M. Goldman, eds. *China: A New History.* Cambridge: Harvard University Press, pp. 408
[91] McBeath, J. H. & McBeath, J., 2010, pp.25; World Bank, 2016. *China.* [Online]
[92] Baum, R., 1980, pp.3

collective farming[93] - began in Anhui and Sichuan provinces. While the HRS was initially done in secret for fear of being thought 'counter-revolutionary', it did not take long for the benefits in productivity to be noticed by members of the CCP. As the productivity of these provinces increased in the early in 1980s, Deng and his reform colleagues made the household responsibility system national policy for the entire country.[94]

Deng's reforms saw a rapid increase in agricultural production throughout the early 1980's, and by the mid-1980's per capita grain availability was reaching record highs. [95] The success of the reforms is evident in that between 1980 and 1986, while rural populations declined the gross output of rural society more than doubled.[96]By the end of this period it was evident that China had successfully managed significant agricultural and economic reform without significant political reform, Deng and his colleagues had managed to make "socialism with Chinese characteristics" work.[97] An example of Deng's success is that in 1984, six years after he took office China became a net exporter of food. Deng's reforms lifted China out of persistent food shortages and malnutrition - in less than a decade China went from chronically food insecure to being somewhat food secure.[98]

Food Security Summary of Period:

Overall this period was one of increasing food security. Through Deng's leadership and reforms, China saw consistent increases in production and per capita consumption of major food items. In the ten years between 1979 and 1989 total meat production tripled, grain increased by 46 percent, rice by 38 percent, and wheat by 82 percent.[99] This increase in production was accompanied by an increase in grain imports. Together these increases in food production and imports saw an increase in per capita grain availability and an overall

[93] Lin, J. Y., 1987. The household responsibility system reform in China: a peasant's institutional choice. *American Journal of Agricultural Economics,* 69(2), pp. 410
[94] Lin, J. Y., 1987, pp. 410; Goldman, M., 2006, pp. 411; Yang, D., 1996. *Calamity and Reform in China.* Stanford: Stanford University Press, pp. 144-176
[95] Zhou, Z.-Y., 2014, pp.39
[96] Goldman, M., 2006, pp. 412
[97] Shirk, S., 1993. *The Political Logic of Economic Reform in China.* Berkley: University of California Press, pp.4
[98] Qureshi, A., 2008. *Food Security in China.* [Online]
[99] Food and Agriculture Organization of the United Nations, n.d. *Food consumption and nutritional status in China.* [Online]
Available at: http://www.fao.org/docrep/u8050t/u8050t03.htm

increase per capita consumption of major food items.[100] For the first time in a generation, Chinese people had food security. When considered across the pillars of food security, the overall increase in food production and imports resulted in greater food availability. The consistent growth in production over this period demonstrated increased food stability. An increase in food access is evident in that the per capita consumption of various major food items grew over this period, this suggests an increase in food utilisation as a per capita increase in various food items indicated a broader, more balanced diet (see table 1 and 2).[101]

Year	Grain	Oil	Meat[a]	Fish	Fruits
1949	113.18	2.56	2.20	0.45	1.20
1952	163.92	4.19	3.39	1.67	2.44
1957	195.05	4.20	3.99	3.12	3.25
1962	160.00	2.00	1.94	2.28	2.71
1965	194.53	3.63	5.51	2.98	3.24
1970	239.96	3.77	5.97	3.18	3.75
1975	284.52	4.52	7.97	4.41	5.38
1980	320.56	7.69	12.05	4.50	6.79
1985	379.11	15.78	17.61	7.05	11.64
1990	446.24	16.13	25.14	12.37	18.74

[a] Pork, beef and mutton only.

Source: State Statistics Bureau, 1991.

Table 1: The output of major farm products in China *(million tonnes)*. Source: Food and Agriculture Organization of the United Nations, n.d. *Food consumption and nutritional status in China.* [Online] Available at: http://www.fao.org/docrep/u8050t/u8050t03.htm

Year	Grain	Edible oil	Meat	Poultry	Eggs	Fish	Sugar	Wine
1952	197.67	2.10	6.84	0.43	1.02	2.67	0.91	1.14
1957	203.06	2.42	6.19	0.50	1.26	4.34	1.51	1.37
1962	164.63	1.09	3.01	0.38	0.77	2.96	1.60	1.14
1965	182.84	1.72	7.31	0.36	1.42	3.33	1.68	1.30
1970	187.22	1.61	6.84	0.32	1.32	2.94	2.06	1.51
1975	190.52	1.73	8.35	0.35	1.63	3.26	2.26	2.18
1980	213.81	2.30	11.99	0.80	2.27	3.41	3.83	3.41
1985	254.35	5.13	15.31	1.56	4.98	4.89	5.63	7.69
1990	238.80	5.67	18.37	1.73	6.27	6.53	4.98	11.63

Source: State Statistics Bureau, 1991.

Table 2: Major foods consumed in China *(kg/person/year)*. Source: Food and Agriculture Organization of the United Nations, n.d. *Food consumption and nutritional status in China.* [Online] Available at: http://www.fao.org/docrep/u8050t/u8050t03.htm

Evidence of Food Securitisation:

[100] Zhou, Z.-Y., 2014, pp. 36-39; Food and Agriculture Organization of the United Nations, n.d. *Food consumption and nutritional status in China.* [Online]

[101] Food and Agriculture Organization of the United Nations, 2008. *An Introduction to the Basic Concepts of Food Security.* [Online]

At the start of this period it was clear that the mandate of the CCP had been critically weakened by the events of the last two decades. As such there was a very real risk to political security of the existing regime and its communist ideology. Deng believed the only way for the CCP to hold onto its mandate was by improving the standard of living for the majority of the population.[102] Increasing food security and using food and agriculture as a tool clearly played a large role in reinforcing the CCP's hold on power.

In terms of using extra-ordinary measures, the turn away from the Maoist type communism towards the HRS and a more pragmatic form of communism – in order to achieve economic reforms and secure food supply - can be seen as an extraordinary measure. The reforms to agriculture not only significantly increased food security, but had the flow on effect of jump starting industrial development and boosting the economy.

2.4 Rising Power 1989- Early 21st Century:

Overview of Period:

Continuing off the back of Deng's leadership and successful reforms, China (barring some periods of inflation and corruption) moved from strength to strength under the successive leadership of Jiang Zemin (1989-2002), Hu Jintao (2002-2012), and Xi Jinping (2012-Present). Using macroeconomic reforms, Jiang continued with Deng's idea of "socialism with Chinese Characteristics", and by the mid-1990's the Chinese economy was growing at a fast pace. During Jiang's tenure as leader of the CCP, the Three-Gorges Dam was built to meet the vast consumption of electricity. China's economic policies sustained it throughout the Asian Economic Crisis 1997-1998, where its neighbours suffered significant declines in their economic growth: the Thai economy shrank by 10.5 percent, the Republic of Korea's and Malaysia's by 7 percent, and the Indonesian economy by 13 percent, bringing the long-running and stable rule of President Suharto to an end amid a humiliating intervention by the International Monetary Fund.[103]The fate of the Suharto regime, would serve as a warning to China of the perils of not sustaining economic growth. After decades of negotiation, in 2001, China was admitted into the World Trade Organisation (WTO). The

[102] Goldman, M., 2006, pp. 406
[103] Wesley, M., 2015. *Restless Continent: Wealth, Rivalry and Asia's New Geopolitics.* Collingswood: Black Inc, pp.84

market based foundation of the WTO and the opening-up of China's markets to the world was significantly removed from any form of Maoist economic policy. However the mindset of the CCP had changed significantly since the time of Mao and China's accession to the WTO was viewed by many in the leadership as the second most important change in economic policy since Deng's reforms.[104]

China accession to the WTO affected a range of areas including the agricultural sector and grain policy, trade, macroeconomic policy, as well as influencing how food security was achieved.[105] As a result of entry into the WTO, the standard of living generally improved across China, and a middle class emerged, however this was predominantly felt in urban areas. The accession had the negative impact of widening the urban-rural wealth gap.[106]

This period also saw China achieve significant milestones in its agriculture. From 1998 to 2000 Chinese farmers achieved the peak of grain production up to that point. While in 2001 China was producing surplus cereals, enabling it to increase its food exports. This resulted in China exporting in excess of 20 million kilograms of food products that year. In the first decade of the 21st century China's agricultural policy went through a number of evolutions, increasing flexibility of what farmers could grow, reducing agricultural taxes, subsidise the cost of production for farmers and increased financial incentives for farmers to produce more and as such earn a better living.[107]

By 2007 – during the 2007-2008 World Food and Energy Crisis – China had between 150-200 million tonnes of grain in storage, which accounted for 30 percent of annual production. Overall China's grain reserves were far in excess of the 17 percent safety level set by the Food and Agricultural Organisation (FAO).[108]

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[104] Lin, J. Y., Cai, F. & Li, Z., 1996, 2008. *The China Miracle: Development Strategy and Economic Reform.* 3rd ed. Hong Kong: The Chinese University Press, pp.284

[105] Chen, C. & Duncan, R., 2008. *Agriculture and Food Security in China: What Effect WTO Accession and Regional Trade Agreements?.* Canberra: Asia Pacific Press

[106] Li, S. & Zhai, F., 2000. *The Impact of Accession to WTO on China's Economy,* s.l.: Development Research Center The State Council, P. R. China; Park, A., 2008. Rural-Urban Inequality in China. In: S. Yusuf, ed. *China Urbanizes: Consequences, Strategies and Policies.* s.l.:World Bank, pp. 53

[107] McBeath, J. H. & McBeath, J., 2010,pp. 28-30

[108] Jiao, W., 2008. *Ample grain to keep food prices stable.* [Online]
Available at: http://www.chinadaily.com.cn/cndy/2008-05/07/content_6665927.htm
[Accessed 30 September 2016]

This growth in agriculture could not last forever. A concern vocalised by the head of the State Grain Administration Nie Zhenbang, saying in 2008, "We now have less room to increase grain planting acreage, and it's becoming more and more difficult to raise yields" – referring to shrinking arable land and water shortages – a view shared by many other policy makers in China.[109]The environmental degradation de to past political eras, but also the more recent rampant use of fertilisers and pesticides - which China (in-part) owes its increase in crop yields to – had turned China's farms into a bigger source of water pollution than its factories.[110]China's arable land – already small on a per capita basis – had been hit hard by a lack of sustainable practices, with more than 40 percent suffering from degradation.[111] This reduction in arable land has pushed China to increase foreign investment in agriculture as well as look outside of its immediate geographical location for sources of food.

Food Security Summary of Period:

Throughout the 1990's and the first decade of the 21st century, China achieved high levels of food security. By 2001 China's per capita food consumption was averaging 2963 calories, above the world average of 2800.[112] Other achievements included improving food quality and nutritional intake. China greatest achievement was reducing under-nourishment in both absolute and relative terms. Overall between the period 1990-1992 and 1998-2000, China decreased the number of under-nourished people by 70 million.[113] In addition to these achievements, grain production and household income had increased. Grain production increased in terms of both total and per capita, by 1.9 and 0.7 percent respectively between 1978 and 2002. While per capita household income, both rural and urban, had increased annually by 7.4 and 6.3 percent respectively between the same period.[114]These successes meant that the Chinese people had sufficient food available, had the income to purchase

[109] Lockett, H., 2015. *China's grain self-sufficiency policy lives on after its official demise.* [Online] Available at: http://www.chinaeconomicreview.com/cereal-dysfunction [Accessed 30 September 2016]; Jiao, W., 2008.
[110] Watts, J., 2010. *Chinese farms cause more pollution than factories, says official survey.* [Online] Available at: https://www.theguardian.com/environment/2010/feb/09/china-farms-pollution [Accessed 30 September 2016]
[111] Patton , D., 2014
[112] Wang, G. & Zheng, Y., 2013. *China: Development and Governance.* s.l.:World Scientific, pp.68
[113] Jiang, T., 2008, pp. 185; Food and Agriculture Organisation, 2002. *The State of Food Insecurity in the World 2002,* Rome: Food and Agriculture Organisation
[114] Jiang, T., 2008, pp. 185

food. While the achievements in reducing under-nourishment demonstrates that Chinese people had access to food of a reasonable quality. All hallmarks of achieving a certain level of food security (FAO's definition) for the Chinese people.

WTO accession had a profound impact on China's food security. As mentioned before, it had the effect of widening the urban-rural wealth gap, hitting the rural poor particularly hard. Overall, in the four years succeeding China's accession to the WTO rural households experienced an estimated average income loss of 0.7 percent. While the rural poor were hit particularly hard, experiencing a 6 percent drop in living standards as measured by consumption, which was the product of reduced income coupled with increases in the price of consumer goods.[115] The overall effect for rural households was a decrease in purchasing power and therefore a decrease in economic access to food. Even though the accession had a negative impact on rural communities, the overall effect it had on China's economy and on the majority of households was positive and as such had a net positive effect on the overall food security situation for China.[116]

China managed to weather the Global Food Crisis 2007-2008 with minimal negative effects. This was a significant achievement for China. Where other developing countries experienced considerable unrest due to price increases and general unavailability of basic food staples, China's food prices only increased moderately. China's success in handling the Food Crisis demonstrated five unique qualities of China's economic and political system: Firstly, China has always considered agriculture a fundamental sector in its economy. Since Deng's reforms, agriculture has played a crucial role in the successful transformation of the Chinese economy. Secondly, China has developed an effective and competitive market system. Its markets are not only integrated domestically but also internationally – in part due to its accession to the WTO. Thirdly, the CCP is the sole political party in power, as such it can respond quickly and efficiently to short-term crisis. Fourthly, China has invested heavily in agricultural, rural and regional development to reduce wealth dipartites between regions and between rural and urban areas. Finally, improving food security is a key goal of China's

[115] Agence France-Presse, 2005. *WTO status hurts China's rural poor: World Bank.* [Online] Available at: http://www.globalexchange.org/news/wto-status-hurts-chinas-rural-poor-world-bank [Accessed 30 September 2016].

[116] Lohmar, B., 2002. *Market Reforms and Policy Initiatives: Rapid Growth and Food Security in China,* s.l.: U.S. Department of Agriculture; Huang, J. & Rozelle, S., 2003. Trade Reform, the WTO and China's Food Economy in the Twenty-First Century. *Pacific Economy Review,* 8(2), pp. 143-156

agricultural policy.[117] As a result of this China's food security remained relatively stable in both FAO terms and Chinese terms. China managed to keep food price from rising, allowing the average Chinese worker to maintain their purchasing power and have access to staple food groups, as well as managing to maintain grain self-sufficiency through its considerable amount of grain in storage throughout this period.

Evidence of Food Securitisation:

Throughout the PRC's history, food (or grain) self-sufficiency – China's definition of food security - has been highly sought after; the post-Deng era was no different.[118]This is due to a number of reasons: Firstly, China is the most populated country in the world; as such it cannot rely solely on the world market for its food supply. Brown in his book *Who Will Feed China?* painted a worrying picture of China's food supply and demand – more specifically that China will not be able to supply its people by itself.[119] While Brown's arguments were dismissed by the Chinese leadership and scholars, they increased concern for China's capacity to independently supply its food.[120] As China cannot necessarily rely on the world market for food, it becomes an issue of national survival, that it is able to meet most of its demand itself.

Secondly, food is considered a special good and the independence of food supply has significant political, economic and military importance. Some policymakers in China fear the possibility of food embargoes, or food being used as a political tool against the PRC, as China has many ideological, political and strategic differences with other global powers.[121] However a food embargo against China seems unlikely as it would be difficult to apply,

[117] Huang, J., Yang, J. & Rozelle, S., 2015. *The political economy of food price policy in China,* s.l.: Cornell University

[118] Lin, J. Y. & Wen, G. J., 1995, pp. 187; Ghose, B., 2014. Food security and food self-sufficiency in China: from past to 2050. *Food and Energy Security,* 3(2), pp. 86-95

[119] Brown, L., 1995. *Who Will Feed China?: Wake-up Call for a Small Planet.* Washington: Norton and Company.

[120] Jiang, T., 2008. WTO accession and food security in China. In: C. Chen & R. Duncan, eds. *Agriculture and Food Security in China: What effect WTO accession and regional trade arrangements?.* Canberra: Asia Pacific Press, pp. 184

[121] Asia-Pacific Centre for Security Studies, 1998. *Food Security and Political Stability in the Asia-Pacific Region.* [Online]; Yang, Y., 2000. Are food embargoes a real threat to China?. In: P. J. Lloyd & X. Zhang, eds. *China in the Global Economy.* Cheltenham: Edward Elgar Publishing, pp. 247

costly to those that initiate it, not to mention that food is often excluded from lists of embargoes commodities based on humanitarian grounds.[122]

From a historical perspective we can see that food has been continually securitised throughout the last six decades of the PRC. Food security is not an issue that only affects a certain class, but is a significant concern for all levels in Chinese society, from the rural worker putting food on the table to members the politburo sustaining growth and maintaining domestic stability. As such, the securitisation of food and ensuring food security will influence domestic policy, as well as unilateral and multilateral foreign policy decisions.

2.5 China stops pursuing goal of self-sufficiency

In 2013, China decided to cease its policy of pursuing food self-sufficiency, which has had significant foreign policy implications for China. This was an important declaration for China, as it is (since 2012) the world's largest importer of agricultural products. [123]While China has achieved significant levels of production – indeed gaining or getting close to self-sufficiency in a few different grains (particularly rice and wheat)[124] – this declaration acknowledges that at present and going into the future it will always have a need for food imports to maintain its food security.

The move away from a self-sufficient food policy is due to the fact that China is rapidly approaching the maximum food production it can attain from its land. Indeed China has experienced a net loss of arable and cultivated land between 1991 and 2009.[125] Additionally the rapid urbanisation of the country is increasing the demand on foods which domestic production cannot keep pace with. The diet of the emerging middle class, and for many hundreds of millions of Chinese, is moving away from what might be considered traditional staple foods such as rice and wheat – it is worth noting that these two foods are the ones

[122] Jiang, T., 2008, pp. 184; Yang, Y., 2000
[123] Lockett, H., 2015; Scherer, C., 2013. *China no longer to be self sufficient in food.* [Online]
Available at: http://www.agprofessional.com/news/China-no-longer-to-be-self-sufficient-in-food-188895761.html
[Accessed 1 October 2016]; Perkowski, J., 2013. *Feeding China's Population.* [Online]
Available at: http://www.forbes.com/sites/jackperkowski/2013/04/25/feeding-chinas-population/
[Accessed 1 October 2016]
[124] Ghose, B., 2014.
[125] Shinn, D., 2015. *China, Africa and Food Security.* [Online]
Available at: http://intpolicydigest.org/2015/07/09/china-africa-and-food-security/
[Accessed 5 October 2016]

that China has achieved a high degree of self-sufficiency in. While consumption of these staple foods is declining, the consumption of higher-value foods, especially those of animal origin, such as meat, milk and dairy products, aquatic products, poultry meats and as well as fruits is increasing. Demand for safe food of high-quality is also increasing, and as a result some Chinese consumers are moving to imported foods due to the dubious quality of some foods produced in China. Put simply as incomes increase across China there is growing demand for certain foods (and quality of food) that domestic production cannot keep pace with.[126] As such China has no choice but to look towards importing food to satisfy demand.

While this increase in demand for higher quality foods might just sound like increasing affluence, it is also a threat to food security. On one hand China is still capable of being grain self-sufficient, which ensures food security from the traditional Chinese view point of grain self-sufficiency, it is not able to domestically ensure food security as defined by the FAO. According to the FAO's definition of food security, of people having "physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life"[127] means that China –through its domestic production - is able to ensure there is sufficient food available, but is unable to meet the other areas of food security. China has difficulty in ensuring that food is safe, which affects the utilisation of food and it is unable to provide a balanced, nutritious diet that is increasingly being demanded across China.

With China resolved to be an importer of agricultural products, it is placing a significant portion of China's food security out of China's hands. Instead China must rely on trade and a favourable international system to ensure food security. This new direction in China's food security has contributed towards a major shift in China's geoeconomic strategy. This new strategy will need to be pragmatic and focussed on foreign economic policy. As China increasingly integrates itself into the world economy it must comes to terms with its role, importance and responsibilities within that economy.[128] There is no doubt that due to its size China is a leader within the global economy, and in particular regarding trade

[126] Scherer, C., 2013; Zhou, Zhangyue; Tian, Weiming; Wang, Jimin; Liu, Hongbo; Cao, Lijuan; 2012. *Food Consumption Trends in China April 2012,* Canberra: Australian Government Department of Agirculture, Fisheries and Forestry; pp.
[127] Food and Agriculture Organization of the United Nations, 2006. *Policy Brief - Food Security.* [Online]
[128] Kitchen, N., 2012. Executive Summary. In: N. Kitchen, ed. *China's Geoeconomic Strategy.* London: London School of Economics, pp. 2

governance. Indeed the decisions China makes now will shape the global economic landscape for years to come.

As such China's foreign policy will play an increasingly big role in achieving food security. Therefore part of China's foreign policy will inevitably be geared towards maintaining food security. Whether it be through securing trade routes or fisheries in the South China Sea, increasing infrastructure for land based trade of goods, including food, in the new silk road, increasing investment in foreign agriculture and agri-business, as well as collaborating with foreign states and research institutions to develop more efficient, productive and sustainable agricultural practices.

2.6 Conclusion

Through investigating the history of food security in the Peoples Republic of China it is obvious why the effective management of food is so important to the current Chinese leadership. Throughout the first few decades of the PRC food security and agriculture suffered from serious mismanagement that resulted in one of the largest famines in human history, killing untold millions. In addition to this a series of what could only be described as misguided decisions led to considerable damage to China's natural environment and arable land. Often areas were transformed in an effort to create more arable land only to do more harm than good, or already arable land was spoiled through the excessive use of pesticides or fertilisers in a desire to increase production. All things considered the loss of arable land only serves to hinder China's efforts of ensuring food security to this day.

It is apparent through Deng's reforms that increasing food security and economic growth go hand in hand. Reforming China's agricultural system provided a much needed stimulus to China's economy and in doing so proved that "socialism with Chinese characteristics" could really work. As the economy grew and changed so did the diet of the Chinese people. Throughout the period of rapid economic growth between the 1980's and 2000's, per capita calorie consumption had never been higher. This tends to suggest a relationship between food security (and healthy workers) and economic productivity. This economic productivity can then be used to help ensure food security.

As food consumption increased and the growing middle class began to change their diet and demand a more protein based diet, China's leadership recognised that they were reaching the limit of what China's arable land could reasonably produce. As such China is now increasingly looking to trade importing food products to maintain food security. In addition to this China will likely be keeping a close eye on any opportunities to secure trade routes or areas that have the potential to yield considerable amount of food products, such as the fisheries of the South China Sea. As such China's foreign policy will play an increasingly large role in maintaining food security. It could also be considered that China's food security situation will play a role in dictating its foreign policy. As such it is crucial to have an understanding of both China's food security situation and also how that manifests itself in foreign policy.

Chapter 3 – Food Security in Chinese Foreign Policy – South China Sea and the One Belt, One Road Initiative

3.1 Introduction

Through examining the history of food security in the People's Republic of China it is clear that food security is of the utmost importance to Chinse leaders. As such food security plays a key role in informing decisions made by Chinese leaders in various areas of their foreign policy. Similar to any other country, China's foreign policy is broad and as such it would take an exceedingly long time to detail every way in which food security has influenced various foreign policy decisions. To provide a snapshot of China's foreign policy this chapter will look at two different policies being pursued by China within Asia. The first is China's unilateral actions in the South China Sea, and the second is the multi-lateral One Belt, One Road initiative spearheaded by China. Both these policies have the potential to increase food security in China, and both have the potential to either have a negative or positive impact respectively on the wider international system. Both these policies impact food security in terms of food availability.

China's actions in the South China Sea, that of increased militarisation and island building, has been articulated as a sovereignty issue. China is claiming ownership over the entirety of the South China Sea. This has the potential to increase China's strategic dominance in the region, protecting a key trade route to China, and also allowing it to gain access to potentially vast resources of hydrocarbons and fisheries. China's policy in the South China Sea, also has the potential to increase tensions and cause instability in the region. This is already evidenced by the Chinese-Philippines dispute focussed on the Spratly Island chain.

China's One Belt, One Road (OBOR) initiative on the other hand has the potential to bring increased prosperity to many of the countries that are included in the initiative. The initiative, which aims to increase economic connectivity and cooperation between China and the rest of Eurasia, has the potential to benefit China's food security on a number of levels. Firstly increased trade will undoubtedly include an increase in the trade of food products. It will also diversify the routes through which food reaches China, thereby

ensuring that if for whatever reason a trade route into China was disrupted, it has other avenues through which it can receive trade.

3.2 South China Sea

China's actions in the South China Sea (SCS) have caused significant international controversy. There are a number of explanations for China's activities, one of which is the need to maintain food security. The basis for the SCS dispute focusses on sovereignty claims of the area and certain land masses present within the sea in particular the Parcel and Spratly Islands chains. The area is dissected by competing sovereignty claims of every state that borders the SCS, China, Taiwan, the Philippines, Vietnam, Malaysia and Brunei. Adding to the territorial disputes, and what has caused the most tension in the region recently, is China's efforts to build military infrastructure on various island chain, with the goal of expanding its exclusive economic zones (EEZ), as well extend its military reach into the region. [129]

The dispute has been particularly heated between China and the Philippines, both of which claim ownership over the Spratly Islands Archipelago. China has established military facilities and garrisons on many of the islands within the archipelago. The Philippines, also claiming sovereignty over the archipelago lodged a claim with the Permanent Court of Arbitration (PCA) in The Hague under the provisions of the United Nations Convention on the Law of the Sea (UNCLOS) against China. The PCA ruled in favour of the Philippines, concluding that China's actions in the area were not legal. China however does not recognise this ruling and has continued its activities in the archipelago.[130]

Another area of contention due to China's actions in the region is effect on Freedom of Navigation. Since China is claiming sovereignty over the SCS, it is demanding to be given notice of any vessels transiting the area. A number of other regional actors, America being a primary non-claimant actor, continue to view the SCS as international waters and see this as

[129] BBC, 2014. *Q&A: South China Sea dispute.* [Online]
Available at: http://www.bbc.co.uk/news/world-asia-pacific-13748349
[Accessed 20 October 2016]
[130] Phillips, T., Holmes, O. & Bowcott, O., 2016. *Beijing rejects tribunal's ruling in South China Sea case.* [Online]
Available at: https://www.theguardian.com/world/2016/jul/12/philippines-wins-south-china-sea-case-against-china
[Accessed 1 December 2016]

a direct threat to the freedom of navigation of the area. America's position is that all nations should adhere to Laws of the Sea set out in UNCLOS, and that it will challenge any attempts to make territorial claims in what it sees as international waters.[131]To challenge this America conducts Freedom of Navigation operations, whereby military forces deliberately transit contested areas, thereby demonstrating it is still able to freely navigate the area. This is often seen as an act of defiance towards China, and as such increases tensions in the region.

China's territorial claims and disputes with other claimant nations has the potential to escalate towards violent actions. In the past, the territorial disputes have resulted in conflict. In 1988 China wrestled the Johnson South Reef from Vietnamese control, in the process killing 64 Vietnamese sailors.[132] While its insistence on being given notice of transiting the waters of the SCS and America's response to this has the potential to for a serious international incident between the two powers.

Both these policies by China are considerably antagonistic to not only the surrounding states who also have claims in the SCS but also to global actors such as America. While China states that its claims are based in historical ownership of various islands in the SCS[133], its continued actions in the region – as well as actions by other actors – have the potential to destabilise the region and could be a flashpoint for conflict in the future. So why then is China going to such lengths to control the SCS and increasing the risk to itself and the region to future conflicts?

China's interest in the SCS can be divided into three "P's" – politics, petroleum, and proteins (fish).[134] It is the latter that this essay will focus on. The SCS is a veritable gold mine of natural resources for those states with the capacity (and legitimacy) to get at them -

[131] U.S. Department of State, n.d. *Maritime Security and Navigation.* [Online]
Available at: http://www.state.gov/e/oes/ocns/opa/maritimesecurity/
[Accessed 5 October 2016]
[132] The Wall Street Journal, 2014. *China's Unchecked Power at Sea.* [Online]
Available at: http://www.wsj.com/articles/SB10001424052702303409004579561601948592782
[Accessed 5 October 2016]
[133] BBC, 2016. *Why is the South China Sea contentious?.* [Online]
Available at: http://www.bbc.co.uk/news/world-asia-pacific-13748349
[Accessed 5 October 2016]
[134] Greer, A., 2016. *The South China Sea Is Really a Fishery Dispute.* [Online]
Available at: http://thediplomat.com/2016/07/the-south-china-sea-is-really-a-fishery-dispute/
[Accessed 5 October 2016]

UNCLOS allows for countries to control access to fish and mineral deposits inside their EEZ.[135]

The South China Sea is flushed all year round by a number of large rivers and flat shallow sea beds, has some of the world's richest reef systems and as a result has over 3000 different fish species and accounts for 12 percent of the global fish catch.[136] Fisheries are important to many of the littoral states around the SCS due to its influence on the economies, lifestyles and diets of their people.[137]

For China the SCS represents a way of achieving food security through increasing food availability, in particular "domestic" production. While China already consumes 34 percent of the global fish production, this consumption is expected to rise by 30 percent by 2030. This growing demand threatens to outstrip supply and as such necessitate the expansion of fishing operations into Chinese claimed waters, which include the South China Sea.[138]

As the population in littoral states grow so does the demand on fish. The University of British Columbia's Fisheries Centre has estimated that catch statistics in the South China Sea has risen by one million tons between 1994 and 2003, resulting in a considerable decline of fish stocks in the SCS. With fish stocks the fisheries in the South China Sea become a strategic commodity, crucial for China's future food and economic security that must be secured and defended. [139]

In addition to fisheries the South China Sea serves as the major shipping route to China from Europe, Africa and the Middle East.[140] As it increases the amount of food it imports, China will also want to secure any routes that the food takes to ensure stability and consistency of food supply. While much of China's imported food comes from the America's, its increasing

[135] Marlay, R. (1997). China, the Philippines, and the Spratly Islands. *Asian Affairs, an American Review, 4*(23), 195-210, pp.200
[136] Greer, A., 2016.
[137] Dupont, A. & Baker, C., 2014. East Asia's Maritime Dispute: Fishing in Troubled Waters. *The Washington Quarterly,* 37(1), pp. 79-98, pp. 80
[138] Dupont, A., & Baker, C. (2014), pp. 81; Ministry of Agriculture of People's Republic of China, 2014. *Niu Dun attends the National Video Conference on Work of Fishery and Fishery Law Enforcement.* [Online]
Available at: http://english.agri.gov.cn/news/dqnf/201401/t20140116_21044.htm
[Accessed 5 October 2016]; Greer, A., 2016
[139] Dupont, A. & Baker, C., 2014, pp. 80
[140] Kaplan, R., 2015. *Why the South China Sea is so crucial.* [Online]
Available at: http://www.businessinsider.com.au/why-the-south-china-sea-is-so-crucial-2015-2
[Accessed 5 October 2016]

agricultural investments in Africa will no doubt mean that it will increasingly import food from Africa and as this will travel through the SCS to reach China.[141] As such, securing the shipping lanes in the South China Sea will have a positive effect on food security and supply going into the future.[142]

In addition to fisheries, China's actions in the South China Sea are also motivated by potential hydrocarbon deposits. In addition to this there is the military imperative to secure its "first island chain". The chain extends from the Yellow Sea, through the East China Sea and around the South China Sea.[143] While these are significant reasons for China actions in the SCS they are outside the scope of this thesis.

3.3 One Belt, One Road

China's One Belt, One Road (OBOR) initiative is a multi-trillion dollar foreign policy and economic strategy of the PRC. The name is derived from the overland 'Silk Road Economic Belt' and 'the 21st Century Maritime Silk Road', both of which were introduced by President Xi Jinping in 2013. The OBOR initiative is touted as the most important feature of Xi Jinping's foreign policy.[144] It is grounded in the goal of increasing connectivity and cooperation between China and the rest of Eurasia – in layman's terms it is focussed on increasing trade between China and Eurasia.[145] Additionally various analysts have also commented that a major domestic driving force behind the OBOR initiative is to transfer excess capacity and reduce China's foreign exchange reserve as its economy is flagging.[146]

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[141] Shinn, D., 2015.
[142] Schoen, J., 2015. *How hungry is China for the world's food?.* [Online]
Available at: http://www.cnbc.com/2015/10/21/how-hungry-is-china-for-the-worlds-food.html
[Accessed 5 October 2016]
[143] Wesley, M., 2012. *What's at stake in the South China Sea,* Canberra: Lowey Institute
[144] The Economist, 2016. *Our bulldozers, our rules.* [Online]
Available at: http://www.economist.com/news/china/21701505-chinas-foreign-policy-could-reshape-good-part-world-economy-our-bulldozers-our-rules
[Accessed 15 October 2016]
[145] Wade, G., 2016. *China's 'One Belt, One Road' initiative.* [Online]
Available at:
http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/ChinasRoad
[Accessed 15 October 2016]
[146] Campbell, C., 2016. *China's Xi Jinping Talks Up 'One Belt, One Road' as Keynote Project Fizzles.* [Online]
Available at: http://time.com/4457044/xi-jinping-one-belt-one-road-obor-south-china-sea-economic-trade-business/

While the OBOR initiative is deeply embedded in China's need to find markets for its construction companies, steel and cement production, as well as investment opportunities to secure supply of key commodities. It is also rooted in the need to develop infrastructure to diversify the supply routes for its imports in various resources (in particular food and energy).[147]

The initiative envisages the construction of six major economic corridors, as well as a number of maritime pivot points to facilitate increased economic cooperation throughout Eurasia. On land these include China-Mongolia-Russia, China-Central Asia-West Asia, the China-Indochina peninsula, China-Pakistan, Bangladesh-China-India-Myanmar, and the New Eurasian Land Bridge. While the maritime pivot points will focus on providing secure and efficient transport routes between major sea ports along the belt and road.[148]

The OBOR initiative has become a key part in China's foreign policy and it underlines China's desire to increase its role in global affairs. As such the OBOR initiative wields plenty of financial muscle. When it launched in 2014, it did so with $40 billion, mostly drawn from Beijing's considerable foreign exchange reserves. Since then the OBOR initiative has attracted plenty of foreign investment. Singapore's state-owned development board partnered with China Construction Bank, investing $22 billion to finance OBOR projects.[149]

Throughout Asia, Chinese companies are funding and building railways, roads, bridges and tunnels, increasing trade and making China the dominant economic power throughout the continent. China is taking its expertise in building High Speed Rail to the rest of the world. China plans to build a number of High Speed Rail networks connecting itself to all of South East Asia. In Pakistan China plans to build a $46 billion economic corridor, complete with road, railways, bridges and pipelines. The corridor will extend from the Port of Gwadar on the Arabian Sea to Northwest China. This will reduce China's dependence on sea routes in

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[Accessed 15 October 2016]; Li, X. & Yanzhuo, X., 2015. *How China Can Perfect Its 'Silk Road' Strategy.* [Online] Available at: http://thediplomat.com/2015/04/how-china-can-perfect-its-silk-road-strategy/ [Accessed 15 October 2016];

[147] QIC, 2016. *The New Silk Road - Shifting the Economic Centre of the World East.* [Online] Available at: http://www.qic.com/knowledge-centre/the-new-silk-road-20160301 [Accessed 25 November 2016]

[148] Wade, G., 2016. *China's 'One Belt, One Road' initiative.* [Online]

[149] Wilson, W., 2016. *China's Huge 'One Belt, One Road' Initiative Is Sweeping Central Asia.* [Online] Available at: http://nationalinterest.org/feature/chinas-huge-one-belt-one-road-initiative-sweeping-central-17150 [Accessed 15 October 2016]

the Indian Ocean and through the South China Sea.[150] China's infrastructure investments are not limited to Asia. To penetrate that affluent European markets, China is financing the upgrade of the Greek port of Petraeus, as well as $3 billion bullet train between Budapest and Belgrade. In addition to this, a network of roads, railways and pipes will stretch from the city of Xian as far west as Belgium.[151]

While the OBOR initiative is still in its early stages a considerable amount of effort and capital has been invested into it, it is obvious that the project is vast, ambitious and costly. With China stating that it will invest over $4 trillion in countries involved in the OBOR initiative.[152]

In addition to the financial cost of such an ambitious undertaking is the impact it has on China's relations with other Eurasian states. Moscow in particular is far from pleased to be losing its pre-eminence in Central Asia, a region it has dominated for the last two centuries.[153] Furthermore China's tendency to use its own labour on foreign projects has led to complaints that China's infrastructure projects only benefit Chinese contractors. Nonetheless with economic growth slowing in many developing countries Chinese capital investment seems welcome for the time being.[154]This sentiment is one that is shared by many across Eurasia, glad for Chinese investment and development that will see increased economic cooperation.

3.4 Discussion

While neither China's activities in the South China Sea, or the One Belt, One Road initiative are motivated exclusively by food security concerns, it is evident that food security does potentially benefit from both these policies. Rather instead of focussing exclusively on food security both these policies are driven by a multitude of reasons including economic, strategic, or resource security. Indeed it is difficult to find a foreign policy based exclusively

[150] Wilson, W., 2016; Wu, S.-s., 2016. *Singapore-Kunming Rail Link: A 'Belt and Road' Case Study.* [Online] Available at: http://thediplomat.com/2016/06/singapore-kunming-rail-link-a-belt-and-road-case-study/ [Accessed 15 October 2016]
[151] Wilson, W., 2016
[152] The Economist, 2016
[Accessed 15 October 2016]
[153] Wilson, W., 2016
[154] Ibid

around food security, in today's dynamic global system, the best foreign policies should seek to achieve goals in a number of different areas.

Of global trade, 90 percent of it is shipped around the world on the oceans. This is in the trade of agricultural products, the majority of which are transported by sea freight.[155] Both the policies in the SCS and the OBOR initiative focus on the security of trade coming through the South China Sea, with particular reference to the area being home to a number of choke points. Due to China's geography, all of its ports are located in the East – broadly speaking they are either on the South China Sea or the East China Sea. As such shipping to reach these ports they must pass through any number of potential choke points, see Figure 3. While figure 3 is highlighting the insecurity for the transport of hydrocarbon it is just as relevant for sea based food trade going to China.

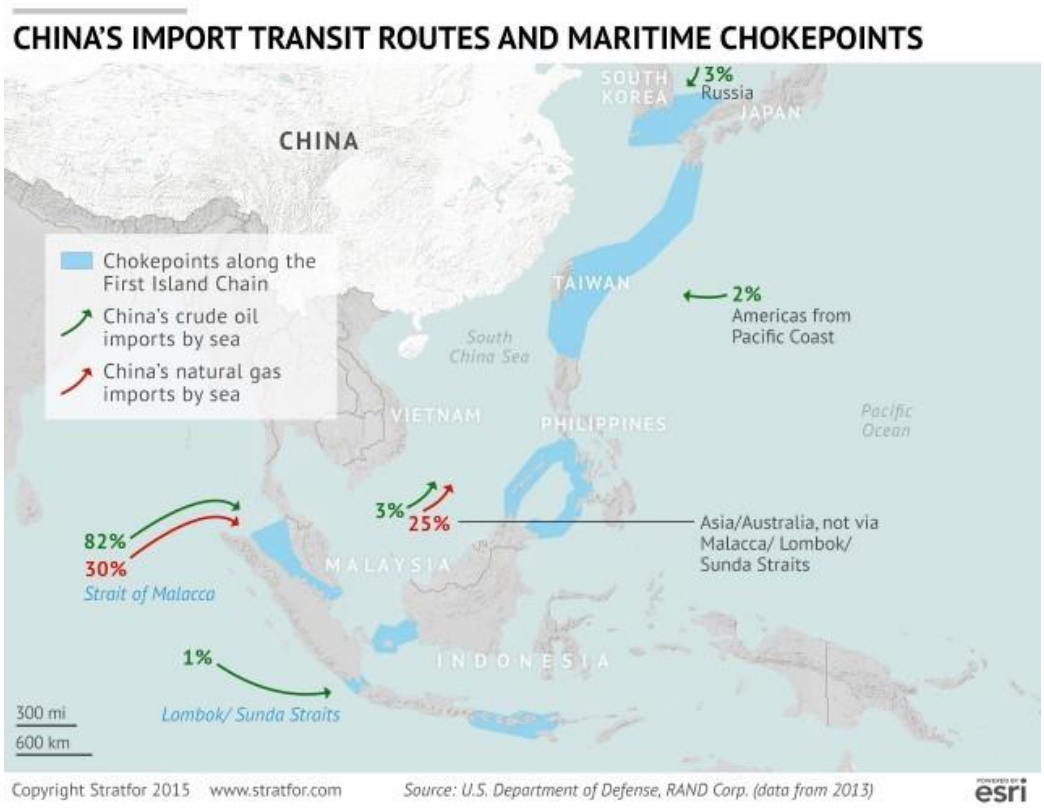

Figure 2. Source: Stratfor, 2015. *The Grand Design of China's New Trade Routes | Stratfor.* [Online] Available at: https://www.stratfor.com/analysis/grand-design-chinas-new-trade-routes

[155] International Chamber of Shipping, 2016. *Shipping and World Trade.* [Online] Available at: http://www.ics-shipping.org/shipping-facts/shipping-and-world-trade [Accessed 29 November 2016]

If Chinese trade were cut off from the SCS, or was restricted by one of the chokepoints in Figure 2, it would considerably reduce the amount of trade getting into China. This would have significant consequences for Chinese food security, as it would mean up to 90 percent of Chinese food imports were being waylaid.

Such a situation could emerge as a result of a conflict with another major power. While it seems very unlikely that this could occur it is a possibility that must be planned for. As such China's activities in the South China Sea are seeking to increase China's dominance in the region, reducing the likelihood or the ability for an adversary to operate against China in the region. This would ensure that Chinese trade can continue to pass freely through the region.

On the other hand the increased trade routes to China, a key part of the OBOR initiative would see six new trade corridors established, see Figure 3. The benefit for food security would be the increased diversity of routes through which agricultural trade could reach China.

Figure 3. Source: Stratfor, 2015. *The Grand Design of China's New Trade Routes | Stratfor.* [Online] Available at: https://www.stratfor.com/analysis/grand-design-chinas-new-trade-routes

The benefit the OBOR initiative will have for food security lies in the increased and varied avenues of trade to China. The increased infrastructure - in the form of railways, highways,

and bridges – throughout Eurasia will mean greater quantities of commodities will be able to be transported across land to China.

As can be seen from Figure 3, the additional transport corridors will increase the routes through which trade travels to and from China. In particular ports along the Indian Ocean and the Arabian Sea, which are then connected to China via railway or highway networks will mean that Chinese trade can bypass the South China Sea and its bottlenecks. Similarly the China-Central Asia-West Asia transport corridor will mean that trade from Europe will be able to travel overland on instead of by sea, further diversifying trade routes.

The multiple land and sea routes will mean that China will no longer be as dependent on trade coming through the South China Sea, which is a natural choke point. While a sea-based embargoes against China (one in which its ports are blockaded) seems very unlikely, increasing the routes that trade comes to China will lessen the impact that any embargo might have on China. It seems highly unlikely that any adversary would be capable of coordinating a blockade against all land and sea based routes into China.

3.5 Conclusion

As China's has resolved to be an importer of agricultural products its foreign policy and its actions in the international realm will play an ever increasing role in maintaining food security. This chapter has focussed on two elements of China's foreign policy that help achieve food security. In particular they increase food security by increasing food availability in terms of both production and food distribution. The first is China's activities in the South China Sea. This region has the ability to affect food security in two main ways. Firstly it is home to significant fisheries. As such claiming ownership over and controlling these fisheries will bring whoever controls them vast quantities of fish. To China, which already consumes 34 percent of the worlds annual fish production, this is a very valuable region.

Secondly, China's actions in the South China Sea can increase food security by limiting the risk to sea-borne trade coming through the region. The South China Sea has a number of chokepoints surrounding it that could restrict trade coming to China in the event of China being involved in a significant conflict. As such China seeks to secure these trade routes, and it is doing this by increasing its military presence in the region.

However for similar reasons that the region is valuable to China it is also valuable to the other claimant nations. As such China's drive to secure the region and its resources for itself is increasing friction between itself and many other the other claimant nations, increasing the instability of the region.

China OBOR initiative will have a positive impact on food security for reasons similar to its activities in the South China Sea. Having identified that the South China Sea has a number of bottleneck which could reduce the amount of trade getting to China, the OBOR initiative, diversifies the trade routes to China. By doing so it reduces the importance of the South China Sea as a trade route.

As China continues to develop and its middle-class grows in size, the demand placed on food from overseas will continue to grow. This will increase China's dependence on trade for ensuring food security. As China's dependence on trade for food security increases it is likely we will see more foreign policy, be it militarily dominating a region, or increasing trade routes, to ensure trade is not interrupted.

Both its South China Sea activities and OBOR initiative are costly for China, in terms of increasing tension and instability in the region as well as from a purely financial perspective. If managed well both have the potential to offer greater food security in relation to food access. While both are costly neither would be as costly to the Chinese government or its people as food insecurity.

Chapter 4 – China's Agricultural Relationships with the Developing and Developed World

4.1 Introduction

Rising demand for a non-grain based diet in China, coupled with land degradation and overall loss of arable land, has meant that China can no longer ensure food security using its domestic agricultural practices of the past. In order to ensure food security China leaders have recognised the need to turn to overseas farming, and increased trade, to complement a strengthening of domestic production.[156] In 2010 Chinese Minister for Agriculture said that "The time is ripe for the country's agricultural companies to embark on a go outward strategy".[157]

The purpose of this chapter is to investigate how China is ensuring food security through developing various relationships with other countries. Broadly speaking this chapter will focus on two main areas: China's involvement in the developing and developed world. To investigate China's involvement in the developing world, this chapter will look at China's activities in Africa and South America. This part of the chapter will also examine what affects an increased Chinese presence– as a result of a need to achieve food security - is having on the developing world.

To investigate China's relationships with the developed world this chapter will look at China's investment and acquisition of global agribusinesses. It will also look at China's collaboration with various countries which have a proven track record operating a successful, innovative and sustainable agricultural system.

China's increasing involvement with other countries in regards to agriculture increases its own food security through a number of ways. In developing countries where it is investing in agricultural aid, there is potential for increased access to markets once these countries have developed an agricultural industry capable of exporting food. In this way it increases China's food availability through an increase in trade. Additionally procuring food that China is

[156] Horta, L., 2014. *PacNet #64 - The rice paddy beyond the sea.* [Online]
Available at: https://www.csis.org/analysis/pacnet-64-rice-paddy-beyond-sea
[Accessed 10 November 2016]
[157] Horta, L., 2014. *Chinese Agriculture Goes Global.* [Online]

unable to domestically supply in sufficient quantities is increasing food access and utilisation by providing a access to a diverse diet. Finally its involvement with developed countries allows China to increase food availability through greater domestic production. This is a result of greater access to intellectual property from various agribusinesses as well as increasing the efficiency and sustainability of its agricultural practices.

4.2 China's Relationship with the Developing World – Africa & South America

4.2.1 Investment in Africa

China's drive for attaining food security through international avenues has led it to Africa. The combination of vast tracts of agricultural land, as well as developing countries in need of investment makes the region very attractive area for increasing food security. As such China and several African states have a significant agricultural relationship. In particular China imports grains, soy beans and meat from Africa.

As the location of approximately 60 percent of the world's uncultivated land, Africa has considerable potential to produce and export food.[158] The relationship between China and Africa that this thesis is focussing on takes the form of China providing aid to African states, most commonly in the form of development and agricultural aid.[159]Chinese agricultural aid includes infrastructure construction, food production, livestock breeding, technology exchange, scholarships, as well as the storage and transport of agricultural products. In addition to this Chinese banks also finance agricultural development projects.[160]

There has been much coverage of a Chinese 'land grab' in Africa, especially since the 2007-2008 food crisis. The alleged land grab has raised concerns about corruption, large-scale resettlements of populations and even a new colonisation of Africa.[161] This idea is partly grounded in the fact that in recent years China has emerged as Africa's largest trading

[158] Shinn, D., 2015.
[159] Breslin, S., 2012. Access: China's Resource Foreign Policy. In: N. Kitchen, ed. *China's Geoeconomic Strategy.* London: London School of Economics, pp. 21
[160] Shinn, D., 2015.
[161] Sy, A., 2015. *What do we know about the Chinese land grab in Africa?.* [Online]
Available at: https://www.brookings.edu/blog/africa-in-focus/2015/11/05/what-do-we-know-about-the-chinese-land-grab-in-africa/
[Accessed 1 November 2016]

partner.[162] However the claim that China is involved in a large-scale 'land grab' is more fiction than fact.[163] In terms of investment in African land, China accounts for only 4.4 percent. Whereas France and England are two of the biggest investors, and even South Africa invests more into the continent than China.[164]

While China's current investment in Africa is relatively small in comparison to Western states, it is nonetheless working to increase agricultural development on the continent. Africa's abundance of arable land does factor in China's long-term plan to address its food security needs. Indeed there has been a notable increase in demand for African agricultural commodities in China.[165]

Chinese acquisition or 'lend-lease' of land in Africa has predominantly been in the Democratic Republic of the Congo, Ethiopia and Mozambique.[166] This has been done through various private and state-owned Chinese agricultural companies. In regards to these leases it seems that the present goal is to increase food production to meet local and regional demand, rather than export food to China.[167] However there is the potential for greater food production to supply some of China's demand. While China does not import much food products from the aforementioned African states it does import a considerable amount from Zimbabwe, one of China's closest African partners. China imported approximately $600 million of food products from Zimbabwe in 2015, the largest amount of food imported from any African country.[168]

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[162] The Economist, 2013. *China and Africa: Little to fear but fear itself.* [Online]
Available at: http://www.economist.com/news/middle-east-and-africa/21586583-slowing-demand-raw-materials-will-not-derail-african-economies-little-fear
[Accessed 20 November 2016]
[163] Shinn, D., 2015.*;* Cassell, D., 2013. *China's role in African agriculture.* [Online]
Available at: http://www.ictsd.org/bridges-news/bridges-africa/news/china%E2%80%99s-role-in-african-agriculture
[Accessed 1 November 2016]
[164] Chen, W., Dollar, D. & Tang, H., 2015. *China's direct investment in Africa: Reality versus myth.* [Online]
Available at: https://www.brookings.edu/blog/africa-in-focus/2015/09/03/chinas-direct-investment-in-africa-reality-versus-myth/
[Accessed 1 November 2016]
[165] Cassell, D., 2013. *China's role in African agriculture.* [Online]
[166] Shinn, D., 2015.
[167] Ibid
[168] World Integrated Trade Solutions - World Bank, 2015. *China Food Products Imports By Country 2015.* [Online]
Available at:
http://wits.worldbank.org/CountryProfile/en/Country/CHN/Year/2015/TradeFlow/Import/Partner/by-

China's strategy in Zimbabwe makes an interesting example of how Chinese policy in Africa could look like going into the future. China has considerable investments across Zimbabwe's crisis ridden economy and also supports the Mugabe regime.[169]Chinese investment in Zimbabwe has taken the form of modernising its agriculture and mining industries. In 2003 Mugabe agreed to a Chinese agricultural investment deal to increase Zimbabwe's corn production, in the hope of restoring Zimbabwe's agricultural self-sufficiency and regaining its status as the 'breadbasket of Africa'. Even though this initiative was not successful, China became a significant destination of much of Zimbabwe's agricultural trade.[170]

In addition to Chinese investment, the relationship between the two countries was deepened in December 2015 as Zimbabwe's adopted the Chinese Yuan as its primary international currency. This move coincided with China cancelling $40 million of Zimbabwean debt. Mugabe insists that the move the Yuan was not due to Chinese pressure, but rather part of Zimbabwe's 'Look East' foreign policy.[171]

If China can provide evidence that through its assistance, Zimbabwe undergoes marked economic and political improvements, it can use this to set a precedent around which other sub-Saharan African countries can pivot towards China. China's expanded trade links with various African countries, particularly those with strained relationships with the West provide Beijing an opportunity to replicate its Zimbabwe strategy. Since 2014, Ghana and Nigeria have begun to move their currency reserves away from the US dollar towards the Yuan.[172]

China's increased ties with Zimbabwe are the culmination of decades of cooperation. If the adoption of the Yuan and Chinese investment be linked to a revival of the Zimbabwean economy it could herald an increased influence for China in Sub-Saharan Africa, thereby increasing China's opportunity to trade with Africa and increase its food security through trade.

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country/Product/16-24_FoodProd
[Accessed 1 November 2016]

[169] Ramani, S., 2016. *Zimbabwe: China's 'All-Weather' Friend in Africa.* [Online]
Available at: http://thediplomat.com/2016/01/zimbabwe-chinas-all-weather-friend-in-africa/
[Accessed 1 November 2016]

[170] Ramani, S., 2016. *Zimbabwe: China's 'All-Weather' Friend in Africa.* [Online]

[171] Ibid

[172] Ibid

Chinese investment in Africa is far more complex than a land-grab designed to increase food supply to China. China has invested hundreds of millions of dollars into research centres and has placed its own agricultural scientists throughout Africa. This has greatly increased agricultural efficiency and crop productions and helped alleviate food shortages.[173] While Africa does contribute to Chinese food security through the supply of food products such as grains, soy beans and meat, China is helping Africa consolidate its own food security through its own expertise and investment. China's strategy may well be to increase Africa's agricultural surplus, and in doing so help Africa achieve food security and help supply China's demand for imported food.[174]

4.2.2 Involvement in South America

Similar to its relationship in Africa, China invests considerable amounts of time, energy and money in South and Central America. Chinese agricultural companies have invested in and purchased land throughout Brazil, Argentina, Venezuela, Bolivia, Chile, Uruguay, Peru, Cuba and Mexico. While there is limited data on the amount of land China has bought or leased[175], China has invested in at least tens of thousands of hectares of land throughout the region.[176]

Brazil, Peru and Argentine feature heavily in China's imports from the region, the first two are ranked 3rd and 5th in food products exports to China.[177] China's main import from these two countries is soybean or soymeal, making up 71 percent of its trade with Argentina (2013) and 41 percent with Brazil (2014).[178] In addition to soy products Argentine and Brazil also supply beef, corn, fruit and luxury food items (such as coffee and wine). Additionally throughout the region China imports significant amounts of food products such as wheat, rice, corn, sugar and vegetable oil from the region.[179]

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[173] Horta, L., 2014. *Chinese Agriculture Goes Global.* [Online]
[174] Horta, L., 2014. *Chinese Agriculture Goes Global.* [Online]
[175] there are discrepancies of up to hundreds of thousands of hectares between various reports
[176] Myers, M. & Jie, G., 2015. *China's Agricultural Investment in Latin America: A Critical Assessment,* Washington: Inter-American Dialogue, pp. 12
[177] World Integrated Trade Solutions - World Bank, 2015
[178] Turzi, M., 2016. The Agropolis: South America, China and the Soybean Connection. In: M. Myers & C. Wise, eds. *The Political Economy of China-Latin America Relations in the New Millenium: Brave New World.* s.l.:Routledge, pp. 170-188.
[179] Myers, M. & Jie, G., 2015 , pp. 3

Similar to its activities in Africa, China's involvement in South and Central America is not centred solely on the buying or leasing of land. Rather it is focussed on a diverse range of areas, which include investment in agricultural but increasingly includes investment across the industry supply chain in an effort to control both supply and pricing.[180] Indeed it has been recognised by industry leaders in China as well as members of the central government that instead of investing in land, China should focus on agricultural processing and logistics. The aim of this investment being to increase Chinese control over foreign production, processing and logistics for commodities, such as soy, that cannot be supplied domestically in sufficient quantities.[181]

China's preference for diversifying its forms of overseas agricultural investment is indicative of a growing interest by Chinese agricultural companies to compete effectively with large agricultural multinational companies [such as ADM, Bunge, Cargill, and Louis Dreyfus (ABCD)].[182] This is particularly the case for China National Cereals, Oils and Foodstuffs Corporation (COFCO), China's largest grain trader. In 2011, the then COFCO president Patrick Yu, indicated that the ABCD companies serve as a good example to COFCO through their involvement throughout the supply chain. His point being that ABCD companies, through their strategy of procuring crops from farmers and providing agricultural services and infrastructure, rather than being involved in farming, effectively controlled the majority of the raw material base in North and South America.[183]

4.2.3 Discussion

In both Africa and South and Central America, Chinese agricultural investment is increasing to meet Chinese demand for imported food. While the idea that China is heavily involved in 'land grabbing' practices in these regions makes a catchy headline, the truth is that investment in land is only a fraction of overall agricultural investment. Rather it is working to invest in increasing agricultural efficiency and overall production capacity of various states in both continents, as well as investing across the entire production chain.

[180] Ibid, pp.8
[181] Ibid, pp. 9
[182] Ibid, pp. 8
[183] Ibid, pp. 7

If its efforts are successful China's investments will mean food production will not only meet the needs of the host country but there will be enough surplus to export food products to China. This will mean that China's investments not only increase food security for the host country but also for China. Where China is investing in the supply chain, China hopes to be able to influence both supply and pricing.

Additionally China's increasingly close relationship with Zimbabwe could prove to be a defining chapter in its relationship with Africa. If China's relationship with Zimbabwe can revitalise the latter's economy, other African states will likely look to grow their economic and trade relationship with China. Strengthening ties with African nations who are increasingly "looking east" would undoubtedly result in positive outcomes for China's food security.

As China's economy continues to grow, its population increases, and more people are lifted out of poverty, the pressure on China's food systems will grow. More and more people will move away from China's traditional grain based diet and the demand for a protein rich diet will increase. As such the need for China to engage and invest in Africa as well as South and Central America will only increase going into the future.

4.3 China and the developed World

Although China is putting significant efforts and investment into the developing world, when it comes to food its major trading partners are in the developed world. The US, France, Netherlands, Australia, Germany and South Korea all feature in the top 10 countries China imports food from.[184] As such its relationships with these countries are very important in sustaining food security. Similar to its relationships with the developing world, China is investing considerable amounts in the developed world. In this case its investments and involvement with developed countries in regards to food security range from take-overs of large agricultural companies like the Swiss seeds and pesticide group Syngenta.[185]

[184] World Integrated Trade Solutions - World Bank, 2015.
[185] Burger, L., 2016. *China seeks food security with $43 billion bid for Syngenta.* [Online]
Available at: http://www.reuters.com/article/us-syngenta-ag-m-a-chemchina-idUSKCN0VB1D9
[Accessed 16 November 2016]

Collaborating with countries like Canada to innovate their agricultural system.[186] Similarly China's relationship with Australia, beyond its substantial trade in food products, is one of collaboration and sharing ideas and technology with each other.[187] While China has also invested in Australian land, in similar case to Africa and South America, claims of a Chinese 'land grab' are unfounded with China making up only 0.5 precent of foreign land ownership.[188] It is interesting to note that while Chinese investment is often welcomed in the developing world, it is seen in a less positive light in many developed nations, where there exists growing opposition to Chinese investment.[189]

4.3.1 Agribusiness Acquisitions

China's $43 billion take-over of Swiss agri-business giant Syngenta by the state-owned ChemChina marks the largest ever foreign purchase by a Chinese firm.[190] The take-over is not only significant for its size, but by gaining access to Syngenta's intellectual property, China has the opportunity to greatly increase the efficiency of its domestic food production. This is highly valuable as it seeks to feed its ever growing middle-class and modernise its vast agricultural industry.

Due to years of over-farming, extensive use of chemicals and environmental degradation, China's arable land has been significantly reduced. As such China desperately needs to capitalise on its remaining arable land. The Syngenta deal, which brings with it access to

[186] Asia Pacific Foundation of Canada, 2016. *New Solutions to Old Problems: Food Security in China and Canadian Agri-Innovation.* [Online]
Available at: https://www.asiapacific.ca/blog/new-solutions-old-problems-food-security-china-and-canadian
[Accessed 16 November 2016]
[187] Department of Foreign Affairs and Trade, 2012. *Feeding the Future: A Joint Australia–China Report on Strengthening Investment and Technological Cooperation in Agriculture to Enhance Food Security,* Canberra: DFAT
[188] Barbour, L., 2016. *UK tops list of foreign investments in Australian farmland; China owns 0.5 per cent.* [Online]
Available at: http://www.abc.net.au/news/2016-09-06/uk-owns-biggest-proportion-of-foreign-owned-farmland/7820854
[Accessed 16 November 2016]
[189] Spegele, B. & Chu, K., 2016. *ChemChina-Syngenta $43 Billion Deal Approved by U.S. Security Panel.* [Online]
Available at: http://www.wsj.com/articles/u-s-security-watchdog-clears-43-billion-chemchina-syngenta-takeover-deal-1471844896
[Accessed 16 November 2016]
[190] Burger, L., 2016.

Syngenta's top tier chemicals and patent-protected seeds will enable a significant increase in agricultural output for China.[191]

This is not the first major acquisition of a major international agribusiness by a Chinese company. Chinese companies have already spent billions on other mergers and acquisitions. These include the $2.4 billion takeover of Israel's Makhteshim Agan Group, the world's largest producer of generic pesticides and the 400 million euro acquisition of France's Adisseo group, a global animal nutrition feed firm.[192] Indeed if the acquisition of Syngenta does go a head – it could be blocked by regulators in the European Union – it would make ChemChina a world leader in pesticides, as well as genetically modified seeds, to the point that it would be able to compete with U.S. based industry giants such as Monsanto and DuPont.[193]

4.3.2 Collaboration in Research and Development

Besides trade with developed countries and investing or acquiring large agri-businesses, China is also forging bonds with various developed countries that have had significant success in agriculture. China is doing this to learn from their experiences and collaborate on the development of new agricultural practices and technological innovation. Two examples of this are China's relationships with Canada and Australia.

Canada has a strong reputation in food safety and as an agricultural producer that is committed to sustainable agricultural and food production systems. It owes this to strong financial backing by government, easily available resources – financial, human and natural – as well as being home to innovative agricultural technological developments.[194]It is for these reasons that China is seeking closer ties with Canada. Through years of land degradation, China must now move towards more sustainable agricultural practices if it is to continue supplying a significant quantity of food from domestic agriculture.[195]

[191] Ibid
[192] Hongzhou, Z., 2016. *China's Global Food Quest.* [Online]
Available at: http://thediplomat.com/2016/03/chinas-global-food-quest/
[Accessed 16 November 2016].
[193] Hongzhou, Z., 2016. *China's Global Food Quest.* [Online]
[194] Asia Pacific Foundation of Canada, 2016
[195] Wilkes, A. & Zhang, L., 2016. *Stepping Stones Towards Sustainable Agriculture in China,* London: International Institute for Environment and Development

China has recognised Canada's position as one of the world leaders in innovative and highly productive agricultural systems. As such many of Beijing's ministerial and government agencies –which include the Ministry of Agricultural, the Ministry of Science and Technology and the Ministry of Education - have developed ties with Ottawa.[196] This relationship helps facilitate the exchange of knowledge and technological expertise. As well as this it prioritises research and development in particular agricultural science areas which include: genetics and genomes, crop pests and diseases, agri-foods and sustainable production systems.[197] This Sino-Canadian collaboration is already delivering results. For example, a team from the Chinese Academy of Sciences and the University of Toronto have identified a "super star rice crop" that absorbs fertilisers more efficiently and in the process reduces environmental degradation.[198]

This kind of cooperation has been labelled "targeted collaboration" and is enabling China to make their domestic agriculture more efficient, productive and environmentally friendly.[199] All of which undoubtedly increases China's food security and resilience to any shocks to the international food system.

In addition to the Sino-Canadian relationship, China is forging partnerships with numerous other countries, universities and research institutions, with the goal of increasing agricultural sustainability and productivity. For instance in Australia these include The Joint Sino-Australian Laboratory for Food Security and The Joint Sino-Australia Laboratory for Sustainable Agro-Ecosystems, both of which are a partnership between the University of Sydney and the Chinese Academy of Agriculture Science as well as the Nanjing Agricultural University.[200] China has also been involved in the EU's Horizon 2020 program, which is the EU's biggest research and innovation program. Amongst other areas the Horizon 2020

[196] Asia Pacific Foundation of Canada, 2016
[197] Agriculture and Agri-Food Canada, 2015. *Scientific Cooperation with China.* [Online]
Available at: http://www.agr.gc.ca/eng/science-and-innovation/international-engagement/scientific-cooperation-with-china/?id=1191956941446
[Accessed 17 November 2016]
[198] Germination , 2016. *"Super" Rice Might Save Farmers Money, Cut Pollution.* [Online]
Available at: http://germination.ca/super-rice-might-save-farmers-money-cut-pollution/
[Accessed 17 November 2016]
[199] Agriculture and Agri-Food Canada, 2015. *Scientific Cooperation with China.*
[200] The University of Sydney, 2013. *New milestone in Australia-China collaboration on food security.* [Online]
Available at: http://sydney.edu.au/news/84.html?newsstoryid=11116
[Accessed 17 November 2016]

program focusses on food security and sustainable agriculture.[201] The United States and China have an extensive agricultural relationship between U.S. Department of Agriculture and the Chinese Ministry of Science and Technology. This relationship calls for cooperation in agricultural biotechnology, natural resource management, dairy production, food safety, agricultural products processing, water-saving agricultural technology, and bioenergy.[202] Each of these relationships is but one of many in the countries mentioned and throughout the world. Nonetheless it serves to show how extensive China's collaborative and research relationships are with various developed countries.

4.3.3 Discussion

China has considerable interests in the developed world when it comes to increasing its food security. These range from investing in or acquiring large agribusinesses, to collaborating with various governments and research institutions throughout the world. Largely speaking both these endeavours seek to ensure China's food security through increasing food availability as a result of greater domestic production. This is achieved through various methods of increasing agricultural productivity, reducing environmental pollution and increasing sustainable practices.

Through investing in and acquiring large agribusiness, such as Syngenta, China is able to gain access to greater levels of intellectual property which include patented seeds, fertilisers and pesticides. Having access to these represents a major upgrade of China's potential output of its agricultural system as its farms become more productive, while reducing losses due to pests and environmental degradation.[203] Similarly China's collaboration with governments and research institutions increases food security through adopting best practices by countries that have had considerable success in productive sustainable agriculture, such as Canada. Additionally collaborative relationships allow for the joint development of new technologies, practices and even crops that benefits partner nations. Both these endeavours

[201] European Commission, 2016. *Horizon 2020 - The EU Framework Programme for Research and Innovation.* [Online]
Available at: https://ec.europa.eu/programmes/horizon2020/en
[Accessed 17 November 2016]
[202] The White House, n.d. *FACT SHEET: U.S.-CHINA SCIENCE AND TECHNOLOGY COOPERATION HIGHLIGHTS: 32 YEARS OF COLLABORATION.* [Online]
Available at: https://www.whitehouse.gov/sites/default/files/microsites/ostp/st-fact-sheet.pdf
[Accessed 17 November 2016]
[203] Burger, L., 2016.

also serve to increase China's food availability through an overall increase in its domestic agricultural output.

4.4 Conclusion

China has gone to significant lengths in developing international relationships to increase its food security. These include an increased level of engagement in Africa as well as in South and Central America. The former holds significant promise for increased development of agriculture has it has approximately 60 percent of the globes uncultivated land. As such Africa if developed into a food exporting continent could provide China with a plentiful source of food. As such, much of China's current activity in Africa is focussed on providing developmental and agricultural aid. Additionally, allegations of a Chinese "land-grabbing" around the globe, and are blown out of proportion by the media. Nonetheless China has identified Africa as an area worthy of significant investment, and like any investment China will likely be looking to seek a return in the future.

Of particular interest in China's engagement in Africa is its relationship with Zimbabwe. China has provided considerable support to Zimbabwe which has included significant investment in developing Zimbabwe's agricultural system, and China has become a primary destination of Zimbabwe's agricultural exports. In return Harare has adopted the Yuan as its primary international currency. The importance of this relationship is that if China's support of Zimbabwe proves a success in revitalising its economy it could be an impetus for other struggling African nations to look towards China has a means of revitalising their own economies. If this were the case it would mean deeper relationships between these African states and China. Depending on the African states, this could allow China greater access to states with a high potential for increased agricultural output (as well as access to a range of other resources). This would undoubtedly increase China's food security through trade.

Within South and Central America, China has a significant food trade relationship with Argentina, Brazil and Peru. Beyond its trade relationships with these countries, China is focussed on investing in and developing the agricultural supply chain throughout the region in order to influence both supply and pricing. Rather than focussing on investing in land China is more interested in exercising control over production, processing and logistics for food products, especially for those products where there is limited domestic production. In

doing so it is evident that Beijing's policy is for its various agri-businesses to pursue a "going-out" strategy. The end goal of which is for Chinese businesses to be able to compete with large multinational agricultural companies and increase Chinese influence in the agricultural systems of various regions around the world.

Throughout the developed world, two areas that China is focussed on are agribusiness investment and acquisition, as well as collaboration in agricultural research and development. The end goal of both of these endeavours is to increase China's domestic output. It does this through gaining greater access to agricultural intellectual property and technology in the acquisition of major agribusinesses, or through collaborating with countries or research institutions that have a history of successful agricultural practices and innovation.

Broadly speaking, both China's activities in the developing and developed world seek to increase food availability. Food availability is increased through either developing trade relationships which increases food imports, or by increasing the domestic agricultural output as a result of investment in agribusinesses or research and collaboration with various agricultural institutions. Additionally food access and utilisation are increased through China importing a range of food from both the developed and developing world. This allows the Chinese people access to a varied diet they might not have had access to otherwise.

Much of the drive to increase food security through various forms of international dealings is a result of China's decision to abandon the goal of food self-sufficiency. In doing so it has meant that China must look beyond its borders to maintain food security. This was due to a change in diet by China's growing middle class towards foods that China was unable to supply domestically in significant quantities to satisfy demand. As China continues to grow, and more people are lifted into the middle class, the demand on these types of food will only grow. This will increasingly push China towards the international food system in order to ensure it is able to satisfy the demands of its people. As such will we likely to see greater Chinese involvement in developing agriculture and Africa and South and Central America. As well as a greater involvement in investing in various agribusinesses as well as agricultural research and development throughout the world.

Conclusion

Following an examination of the history of food security in the Peoples Republic of China, it is evident that it has considerable influence over certain elements of Chinese foreign policy. This will undoubtedly continue to be the case going into the future. Indeed China is caught in a self-perpetuating cycle of economic growth leading to a larger middle class. This then increases demand on food products that China's domestic production is unable to supply in sufficient quantities. As such it increases the need for trade and favourable international relations to meet these demands and maintain food security. Due to the relationship between a healthy (well fed) population and economic productiveness, so long as China maintains food security, it is likely that its middle class will continue expanding. This results in foreign policy designed to maintain food security. This foreign policy can manifest itself in a variety of different forms that has the potential to either benefit the international system or destabilise it.

Chapter one provided an overview of food security, both the official FAO definition and a unique Chinese definition. While it may seem obvious that food security is important, this chapter served to define exactly why food security is imperative. It did this through an analysis of securitisation theory. In particular looking at how food security can threaten the various security sectors detailed in securitisation theory. This chapter showed that food security is more than just providing enough food, rather a country must ensure that food is available, easily accessible, it must suit the dietary, nutritional and cultural needs of the population, and must be stable to potential shocks. If China is not able to ensure food security, this not only threatens the health of its people, but also the survival of the communist party, the capability of the military, the economy and the environment.

Chapter two examined the history of food security in the People's Republic of China. Starting with the Chinese Civil War and continuing through to the first decade of the 21st century. Broadly speaking this chapter was divided into four different sections, the Mao era, the Deng era, and the post-Deng era and the first decade of the 21st century. This examination took the form of providing a narrative of the particular time period, then analysed the food security situation of that period and where possible defined any particular acts of food securitisation. From this analysis it is evident that throughout the

history of the PRC the Chinese people have experienced periods of extreme food insecurity, most notably in the Great Chinese Famine, but also during latter time periods. This has served to ingrain a strong aversion to food insecurity into the psyche of the Chinese people and its leaders. This history of food insecurity is unique to China and will inform all future decisions - including foreign policy - in regards to food security.

Chapters three and four analysed how Chinese foreign policy is being adapted to meet its food security needs. Chapter three examined China's activities in the South China Sea, and its One Belt, One Road Initiative. China's activities in the South China Sea serve as an example of a unilateral policy with China seeking to increase its dominance of the region. This has the food security benefits of increased access to fisheries as well as protecting key trade routes. On the other hand the OBOR initiative is a more multilateral policy, with China at the helm of a truly colossal infrastructure project involving numerous other nations. The OBOR initiative benefits food security through increased trade as well as diversifying the routes that trade can reach China.

Chapter four looked at China's relationships with both the developing and the developed world. In the developing world China is investing heavily in agricultural aid and in the agricultural systems of the both Africa and South America. Within Africa the food security benefits of investment are the potential for increased trade as a result of increased agricultural output. Additionally China's aid is buying it goodwill and increased influence in the region. This is already evident in Zimbabwe, where both countries have developed a significant relationship with each other. China has invested significantly in Zimbabwe's agricultural and mining industries and Zimbabwe is one of China's main agricultural suppliers. This is an example of mutually beneficial relationship that other African countries may seek to emulate.

South America is home to two of China's top 10 suppliers of food products. The region also produces many of the agricultural products China needs but does not produce itself. As such China is investing heavily in the entire agricultural system though out the region. In doing so China is aiming to increase its control over foreign agricultural production.

In the developing world China's activities include investment and acquisition of large agribusinesses, as well as research and collaboration with various countries and research

institutions. Both these endeavours seek to increase China's food security through greater domestic output. Through investing in and acquiring agribusinesses China is gaining valuable intellectual property, such as seeds, fertilisers and pesticides, with which it is able to increase agricultural output. Similarly through collaboration with various countries and research institutions that have a proven track record in successful agriculture, China is able to learn off of these countries and to implement and develop more effective and sustainable agricultural practices and technologies.

Moving into the future, if one seeks to understand China's foreign policy decision it is crucial to consider the role that food security will play. China clearly recognises the importance of maintaining food security. It also recognises that the consequences of not feeding demand could be dire for the communist party. As such the CCP will go to great lengths and pay a considerable price to ensure food security is maintained. This is clearly evident in China's current foreign policy.

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