## Framework

The standard is maximizing pleasure.

#### Utilitarianism shows a broader view of morals beyond one person.

Robert Cavalier 96 (Robert Cavalier, Director of CMU’s Center for Advancement of Applied Ethics and Political Philosophy, President of the International Association for Computing and Philosophy, Chair of the APA Committee on Philosophy and Computers) Online Guide to Ethics and Moral Philosophy 1996No Publication http://caae.phil.cmu.edu/cavalier/80130/part2/sect9.html#Top%20of%20Page //DebateDrills TJ

**Utilitarianism is a normative ethical theory that places the locus of right and wrong solely on the outcomes (consequences) of choosing one action/policy over other actions/policies. As such, it moves beyond the scope of one's own interests and takes into account the interests of others.** [John Stuart Mill](http://caae.phil.cmu.edu/cavalier/80130/part1/sect4/BenandMill.html) adjusted the more hedonistic tendencies in Bentham's philosophy by emphasizing (1) **It is not the quantity of pleasure, but the quality of happiness that is central to utilitarianism**, (2) the calculus is unreasonable -- **qualities cannot be quantified (there is a distinction between 'higher' and 'lower' pleasures)**, and (3) utilitarianism refers to "the Greatest Happiness Principle" -- **it seeks to promote the capability of achieving happiness** (higher pleasures) **for the most amount of people** (this is its "extent").

#### As a whole, a functioning government should use Utilitarianism to measure the morality of an action. Because a government has many different individuals and ideologies, the only unchanging part of the action would be the result. Thus, optimizing the action around the result to maximize pleasure and minimize harm would be the only avenue of finding morality behind actions in government. In this way, all governments should use utilitarianism as a moral compass to benefit the most people.

## 1AC — Plan

#### Plan text: The United States ought to recognize an unconditional right to strike for agricultural laborers by amending the National Labor Relations Act to extend the definition of ‘employee’ to include agricultural laborers.

#### Squo NLRA fails to protect farmer’s rights to strike – plan amends the NLRA to collectively bargain

**Reilly, 11**, Penn State Law, “Agricultural Laborers: Their Inability to Unionize Under the National Labor Relations Act”, Penn State: Masters of Science, JD Law, URL: <https://pennstatelaw.psu.edu/_file/aglaw/Publications_Library/Agricultural_Laborers.pdf>, 2011 + since most recent citation is from then, KR

**The NLRA gives workers “freedom of association, self-organization, and designation of representatives of their own choosing” in order to equalize the bargaining power** between employers and employees in the hopes of limiting the interruptions to the free flow of commerce.10 **The statute covers a large number of workers based on the broad definition of “employee,”11 but excludes from coverage all agricultural laborers**.12 The NLRA does not define who these agricultural laborers are that are excluded from the right to organize, but rather Congress has instructed the National Labor Relations Boards (NLRB)13 in the annual Appropriations Act that in determining who is an agricultural laborer excluded from the NLRA, to rely on the definition of “agriculture” **found in the Fair Labor Standards Act (FLSA).14 Agriculture in the FLSA is defined as “farming in all its branches ... and any practices ...** performed by a farmer or on a farm as an incident to or in conjunction with such farming operations...”15 The definition also lists specific activities to further define what would specifically be considered agricultural work.16 Therefore, workers whose responsibilities are contained in the FLSA’s definition of “agriculture” are excluded from the right to organize and form unions under the NLRA.

The reasoning behind this exclusion is somewhat vague, especially considering that the bill originally proposed in the Senate did not exclude agricultural laborers from the definition of “employee.”17 There is not much mentioned about the agricultural exclusion because of the statute’s primary focus on addressing problems in the industrial sector. There is, however, a debate from in the House addressing the agricultural laborer exemption,18 where an argument was made that **agricultural laborers should be included because they needed the same protections as industrial** workers. Agricultural labor issues were brought to light in 1935 after governmental investigations into child labor issues and the lack of clean water provided for such workers.19

In response, **two possible reasons were briefly mentioned that may explain why agricultural laborers were excluded: first, in regions like the Midwest, farms are mostly family farms and should not be within the scope of the NLRA,** and second there was a concern that Congress did not have jurisdiction over agricultural workers because it was questionable whether such workers were engaged in interstate commerce.20 Many commentators believe that it was the former argument that led to the exclusion of agricultural workers from protection under the NLRA. Another possible reason for this exclusion as presented by some commentators is that the larger farms lobbied to have their workers excluded from the NLRA.21 While not expressly stated, the most likely explanation is that Congress wanted to protect the family farmer from having to pay higher wages that unions would inevitably demand of the employers.22 Realizing that agriculture was important to the entire nation, Congress wanted to shield this industry from unionization, and wanted to protect the family farmer from having to pay what they could not afford. Congress did not think it necessary to equate the family farmer with big business.

The broad definition of “agriculture” under the FLSA would seem to exclude from the NLRA any worker who is employed by any agricultural entity. This is not the case, however, because **the Supreme Court has adopted a two-part test to determine if an employee is in fact an agricultural laborer excluded from the NLR**A.23 An agricultural employee will be excluded from the right to organize if he or she is engaged in either primary or secondary farming. The Supreme Court has taken the FLSA definition of agriculture and essentially limited its application based on a strict application of the statutory language. Primary farming are those tasks specifically referred to in the statutory definition of “agriculture” such as “cultivation and tillage of the soil [and] dairying.”24 The rest of the definition is considered secondary farming, and therefore a worker is an agricultural laborer if the work performed is of the type that would be performed “by a farmer or on a farm as an incident to or in conjunction with such farming operations.”25

In one of the more recent cases to address the question of who is considered an agricultural employee, the Supreme Court in Holly Farms Corp. v. N.L.R.B. upheld the determination made by the NLRB that workers on live-haul chicken crews do not engage in agricultural labor and therefore are not subject to the agricultural exception from the NLRA.26 The responsibility of the live-haul crew is to enter the farms of independent contractors who raise chickens supplied by Holly Farms; the chickens are then caught and caged by nine chicken catchers, moved by a forklift operator onto a truck to be transported by a truck driver to the processing plant.27 These live-haul crews were not engaged in primary farming because primary farming would have been the actual raising of the poultry, which was the responsibility of the independent contractors, not the live- haul crews.28

The court then focused on whether these live-haul crews were engaged in secondary farming. In doing so, the court immediately found that that the work performed by the live-haul crews were not of the kind “performed by a farmer” because Holly Farms gave up its farmer status as soon as the chicks were delivered to independent contractors for raising.29 As a result of this determination, the truck drivers were not considered agricultural laborers and were therefore not part of the agricultural exception to the NLRA and were able to unionize.30

The court then looked to whether the chicken catchers and forklift operators were engaged in work “on a farm as an incident to or in conjunction with” raising poultry.31 The Supreme Court found that neither the chicken catchers nor the forklift operators “worked on a farm” because the work these employees performed were part of Holly Farms’ poultry processing operations and was not of the type of work contemplated to be included in the statutory definition of “farming.”32 The Supreme Court adopted the reasoning of the NLRB in deciding that the catchers and forklift operators were not performing work “incident to or in conjunction with” the farming operations of the independent contractors.33 In doing so, the Supreme Court decided that it was more important to look at the status of the employer as a farmer rather than where the laborer carried out the responsibilities of the job he or she was hired to perform. Because, as previously determined, Holly Farms was not considered a farmer by the time the live- haul crews went in to catch the chickens, the catchers and the forklift operators were not engaged in secondary farming as defined in the FLSA.34 This meant that all the members of the live-haul crews were not agricultural laborers and therefore all had the right to organize under the NLRA.

The Supreme Court limited the applicability of the definition of “agriculture” in Holly Farms and in doing so opened up the possibility that more workers employed by large, vertically integrated employers would be able to organize.35 By taking the approach to look at the status of the employer rather than where the work is performed, the Supreme Court broadened the already broad definition of “employee” under the NLRA. More employees working for these vertically integrated employers will be able to experience the protection of the NLRA that has been open to industrial workers since the act was first passed in 1935. The impact of the Holly Farms decision is for courts to engage in an in depth analysis before deciding whether a worker is an agricultural laborer not protected by the NLRA. Switching the focus to the status of the employer rather than where the employees are performing their responsibilities will ensure greater protection for workers and a broader reach of the NLRA.

While the definition of “employee” has expanded to include some employees who are employed by agricultural employers, **there is still the exception for agricultural laborers included in the statute and therefore there are still many workers who are unable to form unions.** These may be the **workers that need the most protection because they are the field workers who are subjected to abuse, poverty and hazardous working conditions.36** Many commentators would like to see **the NLRA extended to include agricultural laborers**. The main advantage to **extending the definition of “employee” to include agricultural laborers under the NLRA is that the statute has been in existence for many years, and most of the challenges that would be brought up with respect to agricultural laborers attempting to unionize have most likely already been resolved in other employment sectors allowing the NLRB and courts to rely on precedent. This will make application of the statue to the agricultural laborers consistent with other employment sectors. Reliance on precedent would lead to predictable outcomes when labor disputes arise.** Agricultural laborers still have a ways to go before they will be able to reap the benefits of the NLRA; but, if this were to happen, **agricultural laborers would be able not only to unionize and have their association protected, but also would have the advantage of being able to rely on others with experience and knowledge of the NLRA and its intricacies**.

#### The aff is key to increase incentives to farm: it increases wages, sets safe living conditions, AND helps farmers expand products

**Reilly, 11**, Penn State Law, “Agricultural Laborers: Their Inability to Unionize Under the National Labor Relations Act”, Penn State: Masters of Science, JD Law, URL: <https://pennstatelaw.psu.edu/_file/aglaw/Publications_Library/Agricultural_Laborers.pdf>, 2011 + since most recent citation is from then, KR

**The rate of pay agricultural laborers earn in return for their work would increase if these workers were able to organize and engage in collective bargaining with their employers.** **Agricultural workers in 2008 made between $8.64 per hour and $13.02 per hou**r.50 The hourly wage is relatively low, especially when **compared to other occupations with the ability to unionize that require similar training and working conditions**. For example**, construction laborers in 2008 earned between $10.80 and $14.95 per hour51 and textile, apparel and furnishing workers earned between $9.14 and $18.15 per hour**.52 While there is a wide range of earnings for anyone entering these three professions, **the two professions that are able to unionize earn more per hour on a national level than the agricultural workers who are exempted form organizing under the NLRA**. The low earnings of agricultural laborers as compared to other laborers supports a finding **that the NLRA would benefit agricultural laborers and are the type of workers that were meant to be extended the right to organize. If agricultural laborers were afforded protection under the NLRA to engage in collective bargaining, the likely result would be that bargaining representatives would be able to negotiate with agricultural employers for higher wages** that would lead to less of an earnings gap between agricultural laborers and laborers in other industries.

There is one major similarity between the construction industry and the agriculture industry that would seem to tip the scales in favor of affording agricultural laborers the right to unionize under the NLRA. **That is that both industries hire seasonally.**53 The seasonal nature of agricultural work is often cited as a reason against unionization, but with the similarity in the construction industry and the ability of those workers to unionize, the seasonal nature of agricultural work should be a factor in considering whether or not to include these workers under the NLRA, but is not itself conclusive. If seasonal workers in other industries are able to unionize, the seasonal nature of agricultural work should not be a major point of opposition to allowing agricultural laborers the right to collectively bargain.

**Agricultural laborers are also subject to harsh conditions because of the work that they perform and should be able to organize under the NLRA in order to bargain with their employers for better working conditions**. Agricultural laborers are **not always provided with access to clean drinking water nor are there typically adequate restroom facilitie**s for these workers to use.**55 Unions can help workers to gain access to sanitary facilities and clean drinking water by bargaining for these necessities with the employers.**56 By making these issues part of **a collective bargaining agreement, unions will be able to hold employers contractually liable to follow such conditions** and will thereby improve the conditions of employment for agricultural laborers who would otherwise be subject to sub-standard facilities.

Another hazardous working condition that arises for agricultural laborers **is the exposure to pesticides.** Agricultural laborers may be exposed to pesticides that are carcinogens or other pesticides that affect the endocrine and/or hormone systems.57 Agricultural laborers, especially those who apply pesticides, are at a greater risk of acute pesticide poisoning which many times is more prevalent than it needs to be because agricultural employers do not take the kinds of precautions necessary to prevent pesticide poisoning.58 **Unions again can aid agricultural laborers by limiting such exposure through a collective bargaining agreement because unions would be able to bargain for certain safety precautions to be taken** before workers are able to spray pesticides and can also ensure that safety gear is provided before spraying commences. Inadequate facilities and pesticides are two examples of the hazardous conditions that agricultural laborers are exposed to that could be cured through the right to unionize and collectively bargain with employers. Unions would be able to protect workers from such sub-standard conditions which in turn would lead to less illness and disease that agricultural laborers would be subjected to and would increase productivity on farms because field workers will not be slowed by sickness and would be able to work more as a result.

Further, “farmers, planters, ranchmen, dairymen, nut or fruit growers” are able to form associations for the mutual benefit of all members.59 These **associations allow their members to work collectively in preparing their products for market**.60 These producers are also able to form cooperatives to market their products and **maintain the “bargaining position of individual farmers” in order to prevent adverse consequences of overcrowding the market**.61 These agricultural producers are free to engage in concerted activity for the mutual protection of the association’s members, but agricultural laborers are exempt from asserting these same rights.62 **Agricultural producers are therefore able to become even stronger entities, further widening the differences in the bargaining positions between producers and agricultural laborers**. The unionization of agricultural laborers would better equalize the bargaining position on each side affording laborers the protections they need against agricultural employers as they become more powerful through associations.

## Advantage 1 — Wages

#### Multiple studies prove that farmer’s investments are based on their economic confidence which ONLY the plan boosts

**Wang et. al, 19**, “How Farmers Make Investment Decisions: Evidence from a Farmer Survey in China”, Sustainability, Shuangjin Wang 1, Yuan Tian 2,\*ORCID, Xiaowei Liu 3 and Maggie Foley 4, 1: School of Management, Tianjin University of Commerce, Tianjin 300134, China, 2: School of Economics and Management, Beijing Jiaotong University, Beijing 100044, China, 3: College of Business, St. Ambrose University, Davenport, IA 52803, USA, 4: Davis Business School, Jacksonville University, Jacksonville, FL 32211, USA, URL: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwii17vKue7zAhVdJjQIHUr3D7YQFnoECAUQAQ&url=https%3A%2F%2Fwww.mdpi.com%2F2071-1050%2F12%2F1%2F247%2Fpdf&usg=AOvVaw1RMvM-hGadn_uoetBxebDi>, KR

**A variety of research methods were used in previous research to study farmers’ investment adjustment behavior from different perspectives**. For example, Factor Analysis [3,7], Multinomial Logit Model [8,10,11], Deterministic Discrete Event Model [9], Mixed Logit Model with Flexible Mixing Distribution [12], Tobit Model [13,14], Probit Model [15–17], and Structural Equation Modeling [18,19].

It is widely accepted **that farmers’ investment adjustment behavior is affected by** many factors, but different literature has different opinions on key influencing factors that affect farmers’ investment behavior. Adimassu et al. [20] have found that farmers’ investments are limited by their capabilities. Okello et al. [21] have revealed that **economic benefits, such as higher yields and income, can affect farmers’ investment in seed selection.** Also, the cropped area, scale of the farmland, and agricultural income significantly influence farmers’ willingness to invest [10]. **The government’s support and favorable policies can positively promote the agriculture investment of farmers** [22,23]. Adimassu et al. [2] finds that farmers’ investment behavior is affected by five major factors: households’ resource endowments, knowledge, and experience of farming, access to information, social capital, and availability of family labor.

Moreover, some economic studies focus on specific factors that affect investment choice, such as state subsidies [24], the impact of agricultural cooperatives [25], risk preferences [26,27], the mode of communal land acquisition [28], government policies [29], and the presence of a price floor [13]. Besides, Ullah and Anad [30] examine the factors that influence the level of agricultural mechanization**: economic condition of farmers, the land tenure system, scale of farmland, cost of fuel, and the cost of renting agricultural machinery. Konrad et al. [15] have found that the scale of farm operations, environmental concerns, and innovation readiness are important for farmers’ technology investments.**

Factors such as the effect of planting structure adjustment and the output elasticity of capital can affect the investment adjustment behavior of farmers, and have been investigated by some studies. Ji et al. [31] have found that **the shortage of a labor force can be supplemented by increasing capital input**. In addition, other reasons may also lead to investment adjustment behavior such **as attitudes toward capital input [4], the amount of agricultural income [32], expected financial benefits from capital input [33], and differences in adjustment capabilities [34].**

#### Crop yield is key for meeting food criteria in upcoming generations

**Tian et al 21**-- Tian, Zhixi [principal investigator, Institute of Genetics and Developmental Biology and former research geneticist at Purdue], et al. "Designing future crops: challenges and strategies for sustainable agriculture." The Plant Journal 105.5 (2021): 1165-1178. (AG DebateDrills)

The first straightforward strategy for designing future crops that meet sustainable agriculture requirements is to improve the following aspects of current well-cultivated crops. **Increasing yield. It is estimated that the yields of major crops need to increase at a rate of 2.4% per year to meet the food supply demand by 2050. However, the current growth rates of the four major crops, maize (Zea mays), rice (Oryza sativa), wheat (Triticum aestivum), and soybeans (Glycine max), are only approximately half of this anticipated rate (Ray et al., 2013).** The development of new varieties with high yield potential that can fill this gap is the foremost mission of the Future Crops Design project. **In fact, in a trial, it was reported that a super-high-yield rice variety could produce one- to threefold more grains under optimal conditions than in normal paddy fields (Liu et al., 2020a). Improving nutritional quality.** Although the amount of food supply has been significantly improved in the last half-century, changes in human lifestyle and food consumption have resulted in a phenomenon called hidden hunger (Nair et al., 2016). For instance, in sub-Saharan Africa and America, about 17–30% of children under the age of 5 years have an inadequate daily intake of Vitamin A (Harjes et al., 2008; Haskell, 2012). **It has been reported that about two billion people are suffering from a chronic deficiency of micronutrients (WHO, 2008), a new threat to human health.** Moreover, the incidence of type-2 diabetes, obesity and colon disease has markedly increased in the past decade (Zhou et al., 2016). **Hence, the second mission of the Future Crops Design project is to generate crops with higher/balanced nutritional quality or specialized metabolites using metabolic engineering and synthetic biology approaches** (Francis et al., 2017; Martin and Li, 2017; Sweetlove et al., 2017; Vasconcelos et al., 2017). **Increasing agricultural resource use efficiency. It was reported that ~17% of arable land has lost productivity since 1945 due to inappropriate agriculture management** (Oldeman, 1994). In fact, nutrient-use efficiencies of today’s crops only reach 30–50% for nitrogen fertilizer (Cassman et al., 2002) and ~45% for phosphorus fertilizer (Smil, 2000). Moreover, fresh water has become a limiting factor for agriculture in many areas in the world. It is estimated that about 2800 km3 of fresh water per year is used for agricultural irrigation, and that crop production decreases by ~20% without irrigation (Siebert and Doll, 2010). **Therefore, to reduce agricultural inputs and environmental burdens, we should aim to develop high nutrient and water-use efficiency crops without yield penalty.**

#### Right now, the US is resorting to farmland expansion to meet food demand—we are on the brink of prohibitive ecological costs from deforestation

**Tian et al 21**-- Tian, Zhixi [principal investigator, Institute of Genetics and Developmental Biology and former research geneticist at Purdue], et al. "Designing future crops: challenges and strategies for sustainable agriculture." The Plant Journal 105.5 (2021): 1165-1178. (AG DebateDrills)

From the perspective of human evolution, each period of rapid population growth, such as during the Neolithic agricultural revolution, which began at about 8000 BC, the hydro agricultural or irrigation revolutions in the Near East, which began about 3000 BC, and the medieval and modern agricultural periods, which began about 1000 AD, benefited from an advance in agriculture (Taiz, 2013; Wallace et al., 2018). The recent rapid population growth during the past 300 years, in contrast, mainly resulted from the Industrial Revolution, which began in Britain about 1760. **The Industrial Revolution greatly increased the range of human activities and accelerated farmland expansion. In 1700, it was reported that nearly 95% of Earth’s ice-free land consisted of wildlands and semi-natural anthromes; however, by 2000, ~55% of these regions were used as arable land** (Figure 1a, data from https://ourworldindata.org/). The Industrial Revolution also gave birth to new technologies and production systems in agriculture, such as the application of larger irrigation systems, and more fertilizers and pesticides. In the 1960s, semi-dwarf wheat and rice varieties were introduced. These semi-dwarf crops exhibit beneficial characteristics, such as improved response to fertilizer input, lodging resistance and enhanced light utilization (Hedden, 2003; Wallace et al., 2018). Along with the fertilizers, pesticides and irrigation systems made possible by the Industrial Revolution, semi-dwarf crops were quickly adopted and resulted in a significant increase in total grain production globally. This big leap in agriculture was known as the ‘Green Revolution’ (Khush, 2001). Indeed, statistical data have revealed that the average daily food supply per person (in terms of calories) has doubled since the middle of the 19th century (Figure 1b, data from https://ourworld indata.org/). It is estimated that the world population will rise to more than 9 billion by 2050 (Alexandratos, 1999; Cassman, 1999), and at that time we will need at least 60% more food than is consumed by humans today. Moreover, our population will continuously increase, reaching over 11 billion by 2100 (Figure 1a, data from https://ourworldindata.org/). **How to feed the increasing population is a challenge facing the whole world** (Tilman et al., 2001; Godfray et al., 2010; Foley et al., 2011; Wallace et al., 2018). **A simple solution to feed a population of 9 billion is to constantly turn wild habitats into farmland**. However, this type of expansion is unrealistic as most of the world’s icefree and non-barren land area has been exhausted, and much of the rest is unlikely to sustain high yields (Cassman, 1999). More importantly, intact forests have been known to play essential roles in protecting the environment, such as storing fresh water, decreasing flooding and regenerating fertile soils. **Clearing of forests will result in prohibitive ecological costs, such as loss of biodiversity and greenhouse gas emissions. It was reported that, due to agriculture expansion, ~30% of all plant species will become extinct** (Taiz, 2013). The destruction of tropical forests releases about 1.1 9 1012 tons of carbon per year, which accounts for 12% of total anthropogenic CO2 emissions (Friedlingstein et al., 2010).

#### But, increased yield prevents devastating environmental destruction which causes major bio-diversity loss that leads to extinction.

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According to the Bulletin of Atomic Scientists, the two greatest existential threats to human civilization stem from climate change and nuclear weapons. Both pose clear and present dangers to the perpetuation of our species, and the increasingly dire climate situation and nuclear arsenal modernizations in the United States and Russia were the most significant reasons why the Bulletin [decided](http://thebulletin.org/press-release/doomsday-clock-hands-remain-unchanged-despite-iran-deal-and-paris-talks9122) to keep the Doomsday Clock set at three minutes before midnight earlier this year.

But there is another existential threat that the Bulletin overlooked in its Doomsday Clock announcement: biodiversity loss. This phenomenon is often identified as one of the many consequences of climate change, and this is of course correct. But **biodiversity loss is also a contributing factor behind climate change**. For example, deforestation in the Amazon rainforest and elsewhere reduces the amount of carbon dioxide removed from the atmosphere by plants, a natural process that mitigates the effects of climate change. So **the causal relation between climate change and biodiversity loss is bidirectional.**

Furthermore, there are myriad phenomena that are driving biodiversity loss in addition to climate change. Other causes include ecosystem fragmentation, invasive species, pollution, oxygen depletion caused by fertilizers running off into ponds and streams, overfishing, human overpopulation, and overconsumption. All of these phenomena have a direct impact on the health of the biosphere, and all would conceivably persist even if the problem of climate change were somehow immediately solved.

Such considerations warrant decoupling biodiversity loss from climate change, because the former has been consistently subsumed by the latter as a mere effect. Biodiversity loss is a distinct environmental crisis with its own unique syndrome of causes, consequences, and solutions—such as restoring habitats, creating protected areas (“biodiversity parks”), and practicing sustainable agriculture.

Deforestation of the Amazon rainforest decreases natural mitigation of CO2 and destroys the habitats of many endangered species.

The sixth extinction.

The repercussions of biodiversity loss are potentially as severe as those anticipated from climate change, or even a nuclear conflict. For example, according to a 2015 [study](http://www.ncbi.nlm.nih.gov/pubmed/26601195) published in Science Advances, **the best available evidence reveals “an exceptionally rapid loss of biodiversity over the last few centuries, indicating that a sixth mass extinction is already under way.”** This conclusion holds, even on the most optimistic assumptions about the background rate of species losses and the current rate of vertebrate extinctions. The group classified as “vertebrates” includes mammals, birds, reptiles, fish, and all other creatures with a backbone.

The article argues that, using its conservative figures, the average loss of vertebrate species was 100 times higher in the past century relative to the background rate of extinction. (Other scientists have suggested that the current extinction rate could be as much as 10,000 times higher than normal.) As the authors write, “The evidence is incontrovertible that recent extinction rates are unprecedented in human history and highly unusual in Earth’s history.” Perhaps the term “Big Six” should enter the popular lexicon—to add the current extinction to the previous “Big Five,” the last of which wiped out the dinosaurs 66 million years ago.

But the concept of biodiversity encompasses more than just the total number of species on the planet. It also refers to the size of different populations of species. With respect to this phenomenon, multiple studies have confirmed that wild populations around the world are dwindling and disappearing at an alarming rate. For example, the 2010 [Global Biodiversity Outlook](https://www.cbd.int/gbo3) report found that the population of wild vertebrates living in the tropics dropped by 59 percent between 1970 and 2006.

The report also found that the population of farmland birds in Europe has dropped by 50 percent since 1980; bird populations in the grasslands of North America declined by almost 40 percent between 1968 and 2003; and the population of birds in North American arid lands has fallen by almost 30 percent since the 1960s. Similarly, 42 percent of all amphibian species (a type of vertebrate that is sometimes called an “ecological indicator”) are undergoing population declines, and 23 percent of all plant species “are estimated to be threatened with extinction.” [Other studies](http://commondreams.org/views/2016/02/10/biodiversity-loss-and-doomsday-clock-invisible-disaster-almost-no-one-talking-about) have found that some 20 percent of all reptile species, 48 percent of the world’s primates, and 50 percent of freshwater turtles are threatened. Underwater, about 10 percent of all coral reefs are now dead, and another 60 percent are in danger of dying.

Consistent with these data, the 2014 [Living Planet Report](http://bit.ly/1ssxx5m) shows that the global population of wild vertebrates dropped by 52 percent in only four decades—from 1970 to 2010. While biologists often avoid projecting historical trends into the future because of the complexity of ecological systems, it’s tempting to extrapolate this figure to, say, the year 2050, which is four decades from 2010. As it happens, a 2006[study](http://science.sciencemag.org/content/314/5800/787) published in Science does precisely this: It projects past trends of marine biodiversity loss into the 21st century, concluding that, unless significant changes are made to patterns of human activity, there will be virtually no more wild-caught seafood by 2048.

48% of the world’s primates are threatened with extinction.

Catastrophic consequences for civilization.

**The consequences of this rapid pruning of the evolutionary tree of life extend beyond the obvious. There could be surprising effects of biodiversity loss that scientists are unable to fully anticipate in advance. For example, prior research has shown that localized ecosystems can undergo abrupt and irreversible shifts when they reach a tipping point.** According to a 2012 [paper](http://www.nature.com/nature/journal/v486/n7401/full/nature11018.html) published in Nature, there are reasons for thinking that we may be approaching a tipping point of this sort in the global ecosystem, beyond which the consequences could be catastrophic for civilization.

As the authors write, **a planetary-scale transition could precipitate** “substantial losses of ecosystem services required to sustain the human population.” An ecosystem service is any ecological process that benefits humanity, such as food production and crop pollination**. If the global ecosystem were to cross a tipping point and substantial ecosystem services were lost, the results could be “widespread social unrest, economic instability, and loss of human life.” According to Missouri Botanical Garden ecologist Adam Smith, one of the paper’s co-authors, this could occur in a matter of decades—far more quickly than most of the expected consequences of climate change, yet equally destructive.**

**Biodiversity loss is a “threat multiplier” that, by pushing societies to the brink of collapse, will exacerbate existing conflicts and introduce entirely new struggles between state and non-state actors.** Indeed, it could even fuel the rise of terrorism. (After all, climate change has been [linked](http://thebulletin.org/climate-change-and-syrian-uprising) to the emergence of ISIS in Syria, and multiple high-ranking US officials, such as former US Defense Secretary [Chuck Hagel](http://www.defense.gov/News-Article-View/Article/603441)and CIA director [John Brennan](http://www.cnsnews.com/news/article/cnsnewscom-staff/cia-director-cites-impact-climate-change-deeper-cause-global), have affirmed that climate change and terrorism are connected.)

The reality is that we are entering the sixth mass extinction in the 3.8-billion-year history of life on Earth, and the impact of this event could be felt by civilization “in as little as three human lifetimes,” as the aforementioned 2012 Nature paper notes. Furthermore, the widespread decline of biological populations could plausibly initiate a dramatic transformation of the global ecosystem on an even faster timescale: perhaps a single human lifetime.

The unavoidable conclusion is that **biodiversity loss constitutes an existential threat** in its own right. As such, it ought to be considered alongside climate change and nuclear weapons as one of the most significant contemporary risks to human prosperity and survival.

#### Warming is linear—every decrease in rising temperatures radically mitigates the risk of existential climate change.

**Xu and Ramanathan 17,** Yangyang Xu, Assistant Professor of Atmospheric Sciences at Texas A&M University; and Veerabhadran Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at the Scripps Institution of Oceanography, University of California, San Diego, 9/26/17, “Well below 2 °C: Mitigation strategies for avoiding dangerous to catastrophic climate changes,” Proceedings of the National Academy of Sciences of the United States of America, Vol. 114, No. 39, p. 10315-10323//recut CHS PK

We are proposing the following extension to the DAI risk categorization: warming greater than 1.5 °C as “dangerous”; warming greater than 3 °C as “catastrophic?”; and warming in excess of 5 °C as “unknown??,” with the understanding that **changes of this magnitude, not experienced in the last 20+ million years, pose existential threats to a majority of the population**. The question mark denotes the subjective nature of our deduction and the fact that **catastrophe can strike at even lower warming levels.** The justifications for the proposed extension to risk categorization are given below. From the IPCC burning embers diagram and from the language of the Paris Agreement, we infer that the DAI begins at warming greater than 1.5 °C. Our criteria for extending the risk category beyond DAI include the potential risks of climate change to the physical climate system, the ecosystem, human health, and species extinction. Let us first consider the category of catastrophic (3 to 5 °C warming). The first major concern is the issue of tipping points. **Several studies** (48, 49) **have concluded that 3 to 5 °C global warming is likely to be the threshold for tipping points such as the collapse of the western Antarctic ice sheet, shutdown of deep water circulation in the North Atlantic, dieback of Amazon rainforests as well as boreal forests, and collapse of the West African monsoon, among others.** While **natural scientists refer to these as abrupt and irreversible climate changes**, economists refer to them as **catastrophic events** (49). **Warming of such magnitudes** also **has catastrophic human health effects**. Many recent studies (50, 51) have focused on the direct influence of extreme events such as heat waves on public health by evaluating exposure to heat stress and hyperthermia. It has been estimated that the likelihood of extreme events (defined as 3-sigma events), including heat waves, has increased 10-fold in the recent decades (52). **Human beings are extremely sensitive to heat stress**. For example, the 2013 European heat wave led to about 70,000 premature mortalities (53). The major finding of a recent study (51) is that, currently, about 13.6% of land area with a population of 30.6% is exposed to deadly heat. The authors of that study defined deadly heat as exceeding a threshold of temperature as well as humidity. The thresholds were determined from numerous heat wave events and data for mortalities attributed to heat waves. According to this study, **a 2 °C warming would double the land area subject to deadly heat and expose 48% of the population. A 4 °C warming by 2100 would subject** 47% of the land area and almost **74% of the world population to deadly heat, which could pose existential risks to humans and mammals** alike unless massive adaptation measures are implemented, such as providing air conditioning to the entire population or a massive relocation of most of the population to safer climates. Climate risks can vary markedly depending on the socioeconomic status and culture of the population, and so we must take up the question of “dangerous to whom?” (54). Our discussion in this study is focused more on people and not on the ecosystem, and even with this limited scope, there are multitudes of categories of people. We will focus on the poorest 3 billion people living mostly in tropical rural areas, who are still relying on 18th-century technologies for meeting basic needs such as cooking and heating. Their contribution to CO2 pollution is roughly 5% compared with the 50% contribution by the wealthiest 1 billion (55). This bottom 3 billion population comprises mostly subsistent farmers, whose livelihood will be severely impacted, if not destroyed, with a one- to five-year megadrought, heat waves, or heavy floods; for those among the bottom 3 billion of the world’s population who are living in coastal areas, a 1- to 2-m rise in sea level (likely with a warming in excess of 3 °C) poses existential threat if they do not relocate or migrate. It has been estimated that **several hundred million people would be subject to famine with warming in excess of 4 °C** (54). However, **there has essentially been no discussion on warming beyond 5 °C**. Climate change-induced species extinction is one major concern with warming of such large magnitudes (>5 °C). The current rate of loss of species is ∼1,000-fold the historical rate, due largely to habitat destruction. At this rate, about 25% of species are in danger of extinction in the coming decades (56). Global warming of 6 °C or more (accompanied by increase in ocean acidity due to increased CO2) **can act as a major force multiplier and expose as much as 90% of species to the dangers of extinction** (57). **The bodily harms combined with climate change-forced species destruction, biodiversity loss, and threats to water and food security**, as summarized recently (58), **motivated us to categorize warming beyond 5 °C as** unknown??, implying the possibility of **existential** threats. Fig. 2 displays these three risk categorizations (vertical dashed lines).

## Advantage 2 — Sustainable Argiculture

#### Farmworkers have been historically prevented from unionizing – recent developments are short in scope but lack further protections key for unions

**Wozniacka, 19**, 5/7/2019, “Less than 1 Percent of US Farmworkers Belong to a Union. Here’s Why.”, CivilEats, Gosia Wozniacka is a senior reporter at Civil Eats. A multilingual journalist with more than fifteen years of experience, Gosia is currently based in Oregon. Wozniacka worked for five years as a staff reporter for The Associated Press in Fresno, California, and then in Portland, Oregon. She wrote extensively about agriculture, water, and other environmental issues, farmworkers and immigration policy, URL: https://civileats.com/2019/05/07/less-than-1-percent-of-us-farmworkers-belong-to-a-union-heres-why/ , KR

Historically Excluded and Unprotected

**Federal and state laws have long excluded farmworker from labor protections.** The National Labor Relations Act of 1935, which forbids employers from firing a worker for joining, organizing, or supporting a labor union, specifically excluded farmworkers and domestic workers. Many of those workers were, at the time, African American.

Farmworkers were also excluded from The Fair Labor Standards Act, enacted in 1938, which guarantees other workers a minimum wage, overtime pay, and other protections. In 1966, the act was amended to partially include agricultural workers in the minimum wage provisions. But 60 years later, farmworkers are still not eligible for overtime pay. The law also offers fewer protections to child agricultural workers than to children in other industries. And those who work on smaller farms are not eligible for the federal minimum wage, which currently stands at $7.25 per hour.

Some do earn a lot more than that per hour. Workers who are paid piece rate—based on how many buckets or bags they pick—can, if they are fast pickers, earn much more than the minimum wage. And some workers get paid an hourly rate that’s higher than the minimum wage. But since farm jobs are seasonal and most farmworkers don’t work year-round, their annual earnings are meager.

In addition, **most farmworkers lack other basic labor protections such as workers’ compensation**, health insurance, and disability insurance. Some states like New York, following the federal government’s lead, have exclude farmworkers from its labor laws. **Only a handful of states have enacted legislation that protects the organizing and collective bargaining efforts** of agricultural workers. A few states, such as California, have also extended overtime pay and other protections to them.

The bottom line: **although federal and state laws don’t explicitly forbid farmworkers from unionizing, they withhold labor protections that make unionizing easier**. In a state where bargaining isn’t specifically protected, **farmworkers may decide to form a union, but an employer does not have to negotiate with them and can retaliate against the workers.**

Because of all this, **convincing farmworkers to unionize has never been more difficult.** “This isn’t steady year-round employment where workers can get together and have a consistent campaign. When farmworkers organize, **it’s often on an isolated farm**. And due to a lack of documentation, **employers have huge leeway to exploit workers and create an atmosphere of fear**,” said Justin Flores, vice president of the Farm Labor Organizing Committee in North Carolina. “Because of all that, traditional labor has deemed agricultural workers un-organizable and has not dedicated campaigns to them. So only a few crazy people historically have been dedicated enough to run a farmworker union,” added Flores.

#### Unions are key for sustainable agriculture – only collective bargaining rights and unionization checks – international union of agriculture proves

**Hurst et. al, 07**, “Agricultural Workers and Their Contribution to Sustainable Agriculture and Rural Development”, ILO, Peter Hurst is the IUF's Occupational Health and Safety Specialist, Paola Termine is the FAO's Rural Institutions and Rural Workers Officer, Marilee Karl is a consultant with the FAO's Rural Institutions and Participation Service.URL: <https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---actrav/documents/publication/wcms_113732.pdf>, KR

To address the problem of unilateral codes, **the IUF**, working with affiliates and several NGOs in a body called the International Flower Co-ordination **drew up a** model International **Code of Conduct** for the Production of Cut Flowers.120 This Code is **based firmly on International Labour Organization standards**. Importers, especially in Germany and the foundation that sets the environmental standards for the Netherlands-based flower auction, were targeted to convince them to accept the International Code of Conduct. Workshops were held for East African trade **unions** on the International Code of Conduct and **how to use it to organize workers and to improve their working condition**s. A Training Manual for shop stewards on how to use the Code has been developed.121

Further **negotiations with the flower producers** have led to the introduction of a Fair Trade in Flowers and Plants scheme coordinated by an industry body, Union Fleurs.

The work around promotion of the International Code of Conduct for the Production of Cut Flowers has highlighted the many problems that IUF affiliates have with codes of conduct, even those drawn up multilaterally and based on ILO standards. The evidence so far is that it is very hard for trade unions in producer countries to use codes of conduct to improve working conditions. To date, there are no examples of a code, even with freedom of association as its cornerstone, leading to the formation of a new union. Some unions have been able to use the code to establish new branches but this is still fairly exceptional and there are some examples of improvements in living and working conditions, especially when a union has been able to append the code to its collective bargaining agreement. The ETI aims to enhance the private sector's contribution to sustainable develop- ment by encouraging business practices that embrace social, environmental and financial responsibility. Ethical supply chain management is a critical aspect of responsible business in developing countries.123 The IUF is participating in the ETI at board level and has also been involved in pilots in the agricultural sector, e.g. horticultural products and bananas. Fair-trade “Fair-trade is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions, such as securing the rights of, marginalised producers and workers - especially in the South”. “Fair-trade” is there- fore a recognized term for agreements between producers in developing countries and commercial buyers who wish to purchase and market products based on stable and "just" or "fair" prices and production criteria which respect labour and envi- ronmental standards.124 Fair trade aims to increase producers' access to markets, improve their incomes, and ensure that their production is based on sustainable development principles.

The Fair-trade Labelling Organizations International (FLO), for example, sets com- mon criteria for fair trade tea, coffee, cocoa, honey, orange juice and bananas. FLO works mainly to label goods from small farmers, but in the tea and banana sectors there are also plantations, and the IUF's concern has been to understand fair trade's impact on employed workers and how fair trade can help them both in organizing trade unions and in improving living conditions, without undermining collective bargaining. Workers promote Integrated Production and Pest Management Integrated Production and Pest Management (IPPM) is a way of growing crops that maximizes control of pests by their natural enemies - pests, parasites and pathogens (diseases), integrated with other crop husbandry measures. This management tech- nique aims to keep pest populations below economically damaging levels and to restrict pesticide use to amounts that are economically justified and reduce risks to human health and the environment. The four key principles of IPPM125 are: Grow a healthy crop, and conserve a healthy soil; Conserve natural enemies - pests, parasites and pathogens; Observe the crop on a regular basis; Farmers and agricultural workers are the experts in pest control. Agricultural **workers often say**, "We know that chemical pesticides are bad for our health and that of our families and communities. So **what are the alternatives**? How do we stop using these poisons?”

One answer is to **ensure workers are trained to understand** and use IPPM **tech- niques**. Normally, it is only farmers who receive IPPM training, especially through Agricultural Workers and Their Contribution to Sustainable Agriculture and Rural Development 65 an educational method called "Farmer Field Schools" (FFS). The FAO has been promoting the use of such techniques through farmer field schools in its country programmes throughout the world. The FAO's integrated pest management pro- gramme (IPM) has been particularly successful in Asia and in 1993, the FAO inter- country programme on IPM rice in Asia organized a global IPM meeting to intro- duce its successful IPM approach to interested policy makers from other regions. Consequently, the FAO, World Bank, United Nations Development Programme and United Nations Environmental Programme established the Global Integrated Pest Management Facility in 1995. This joint programme is housed in the FAO and is the main international agency promoting IPPM worldwide

**The IUF is now working with the Global IPM Facility to train agricultural workers in IPPM techniques**, using the FFS method.

Field Schools mean that **workers, like farmers, go into a field to study how a crop grows, to learn to identify harmful insects, diseases and weeds, and to learn to identify how to protect and encourage beneficial insects.** The workers then draw up their own agro-ecology plan for that particular crop and field, setting out how to grow a healthy crop and how to protect it from pest and disease attack and weed competition by non-chemical means.

Equipped with this new knowledge, **workers can then negotiate clauses requiring use of IPPM programmes in collective bargaining agreements with employers. The aim is to give agricultural workers knowledge and skills on IPPM so that when instructed by an employer or manager to use a toxic pesticide, they can point out that IPPM techniques provide a safer way of controlling the weed, insects or dis- eases.** Safer for themselves and the supervisors, the managers, the community and the environment and for the crop (which may then be sold at a premium price).

Pilot IPPM courses - **the first ever of their kind for waged agricultural workers - were held in 2001 for agricultural trade unions in Tanzania** (TPAWU) and **Uganda** (NUPAW and NUCMAW). **The unions concerned also invited some NGOs and organic farmers' organizations to join the courses**. Training was given by profes- sional IPPM trainers provided by the Facility. The pilot training is ongoing, with a view to expanding it to other unions and countries.

2.4 Workers promote improved health,

safety and environmental standards for pesticides

To improve workplace occupational health, safety and environmental standards, especially targeting fatalities, poisoning, ill-health and pollution resulting from intensive pesticide use, **the IUF started a Global Health, Safety and Environment Project in 1998**. The Project aims to build the capacities of affiliated national unions and the IUF's regional and international networks to tackle occupational hazards within the context **of promoting integrated production and pest manage- ment and sustainable agriculture**. Health, Safety and Environment, A Series of Trade Union Education Manuals for Agricultural Workers have been developed by the IUF and ILO, which are also designed for use by small farmers and non- governmental organizations.126

#### Sustainable agriculture, emphasized by farmers and unions, is key for biodiversity

**FP, 20**, “Biodiversity and Agriculture: Industrial agriculture places consistency and productivity over biodiversity, but preserving the immense variety of life on earth is vital to the health of our planet and helps us safeguard our own food supply.”, Food Print: a non-profit organization dedicated to research and education on food production practices., URL: <https://foodprint.org/issues/biodiversity-and-agriculture/>, 20+ since some citations are from 2020, KR

Given that agriculture’s expanding footprint is responsible for so much habitat loss, **preventing wild lands from being converted into farmland is critical to maintaining biodiversity. By embracing both traditional knowledge and new research, farmers and scientists are producing food in a way that harnesses biodiversity to make the most of what nature provides. This approach is called agroecology, and is a core component of regenerative agriculture**, which builds up natural resources like healthy soil and water rather than using them up.38

While embracing agroecology is **a revolutionary shift away from industrial farming,** it’s nothing new: these practices are often adapted from the practices of indigenous peoples worldwide, who have created complex agroecological systems that exist in balance with nature. Preserving and reviving these indigenous traditions can make agriculture around the world more sustainable and help preserve biodiversity.39 The fact that 80 percent of the world’s biodiversity is preserved on lands that are managed by indigenous people is a testament to agroecology’s potential.40

Agroecology: Harnessing the Benefits of Biodiversity

A critical part of regenerative agriculture **is building a productive agroecosystem that isn’t reliant on chemicals. Harnessing biodiversity is key to this, and breaking up big, monocultured fields with just a few more species can bring great benefits to both crops and wildlife. Creating productive agroecosystems means** — following the example of indigenous peoples’ longstanding traditions — selecting plants that will benefit each other rather than relying on chemical inputs. For example, legumes like beans and lentils add vital nitrogen into the soil, which other plants need to grow. This has benefits that stretch beyond the farm: incorporating legumes into diverse fields not only provides crops with natural fertilizer, it avoids all of the greenhouse gas emissions associated with using synthetic fertilizers, and helps curb global warming.41 Other plants can provide valuable shade or support — like the classic “three sisters” system of Native American agriculture. Mixing plants together like this is called intercropping, and this can help lower the environmental footprint of a farm. Even without chemical inputs, farmers can see enormous benefits when they grow crops in intercropped systems: experiments with corn, beans, wheat, bananas and other crops have all shown that such systems can be more productive than their industrial counterparts while enhancing biodiversity on the farm and making a varied, rich habitat for wildlife.42

Extend Torres 16,

Extend Xu and Ramanathan 17.

Thus, I affirm.